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ANNUAL CALENDAR

FOR SESSION 1918-1919

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SIR THOMAS RODDICK, M.D., LL.D. (Edin. and Queen's), F.R.C.S. (Eng.).
Emeritus Dean and Professor of Surgery in the Faculty of Medicine. 705 Sherbrooke St. W.

WILLIAM GARDNER, M.D.
Emeritus Professor of Gynæcology. 457 Sherbrooke St. W.

HON. CHARLES J. DOHERTY, K.C., D.C.L., LL.D.
Emeritus Professor of Civil, Commercial and International Law. Minister of Justice, Ottawa, Ont.

ACADEMICAL YEAR, 1918-1919

SEPTEMBER, 1918

1	**SUNDAY**	
2	Monday	
3	Tuesday	
4	Wednesday	Royal Victoria College opened, 1899.
5	Thursday	
6	Friday	
7	Saturday	
8	**SUNDAY**	
9	Monday	Last day for receiving applications for the Matriculation Examination.
10	Tuesday	
11	Wednesday	
12	Thursday	Finance Committee.
13	Friday	
14	Saturday	
15	**SUNDAY**	
16	Monday	Conservatorium of Music opens.
17	Tuesday	
18	Wednesday	Matriculation Examination begins. Exhibition, Scholarship and Supplemental Examinations in Arts.
19	Thursday	Strathcona Medical Buildings opened, 1901.
20	Friday	
21	Saturday	
22	**SUNDAY**	
23	Monday	Meeting of Governors.
24	Tuesday	
25	Wednesday	
26	Thursday	
27	Friday	
28	Saturday	Special Registration day for new students.
29	**SUNDAY**	
30	Monday	Special Registration day for students previously enrolled.

OCTOBER, 1918

1	Tuesday	Lectures begin in Arts, Applied Science and Law. Opening address by the Vice-Principal at 5 p.m. in the R. V. C.
2	Wednesday	
3	Thursday	Physics Building Committee.
4	Friday	Meeting of Faculty of Arts.
5	Saturday	Meeting of Faculty of Medicine.
6	**SUNDAY**	Founder's Birthday.
7	Monday	Library Committee. Museum Committee. Meeting of Faculty of Applied Science.
8	Tuesday	
9	Wednesday	Summer Essays in Applied Science to be sent in. Regular Meeting of Corporation.
10	Thursday	William Molson Hall opened 1862. Finance Committee.
11	Friday	
12	Saturday	Interclass Sports.
13	**SUNDAY**	
14	Monday	Conservatorium of Music opened, 1904. Engineering Building Committee. Chemistry and Mining Building Committee.
15	Tuesday	
16	Wednesday	
17	Thursday	
18	Friday	University Sports. No lectures. Meeting of Teachers' Training Committee.
19	Saturday	
20	**SUNDAY**	
21	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
22	Tuesday	
23	Wednesday	
24	Thursday	
25	Friday	
26	Saturday	
27	**SUNDAY**	
28	Monday	Meeting of Governors.
29	Tuesday	
30	Wednesday	
31	Thursday	Redpath Library opened, 1893.

NOTE.—The University is closed on Thanksgiving Day.

NOVEMBER, 1918

1	Friday	Meeting of Faculty of Arts.
2	Saturday	Meeting of Faculty of Medicine.
3	**SUNDAY**	
4	Monday	Meeting of Faculty of Applied Science.
5	Tuesday	Macdonald College opened, 1907.
6	Wednesday	
7	Thursday	
8	Friday	
9	Saturday	
10	**SUNDAY**	
11	Monday	
12	Tuesday	
13	Wednesday	
14	Thursday	Finance Committee.
15	Friday	
16	Saturday	
17	**SUNDAY**	
18	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
19	Tuesday	
20	Wednesday	
21	Thursday	
22	Friday	
23	Saturday	
24	**SUNDAY**	
25	Monday	Meeting of Governors.
26	Tuesday	
27	Wednesday	
28	Thursday	
29	Friday	
30	Saturday	

DECEMBER, 1918

1	**SUNDAY**	
2	Monday	Meeting of Faculty of Applied Science.
3	Tuesday	
4	Wednesday	Meeting of Academic Board.
5	Thursday	Physics Building Committee.
6	Friday	Meeting of Faculty of Arts.
7	Saturday	Meeting of Faculty of Medicine.
8	**SUNDAY**	
9	Monday	Museum Committee. Library Committee.
10	Tuesday	
11	Wednesday	Regular Meeting of Corporation.
12	Thursday	Finance Committee.
13	Friday	
14	Saturday	
15	**SUNDAY**	
16	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
17	Tuesday	
18	Wednesday	
19	Thursday	
20	Friday	Chemistry and Mining Building opened, 1898.
21	Saturday	Last day of lectures in Arts, Law and Applied Science.
22	**SUNDAY**	
23	Monday	Meeting of Governors.
24	Tuesday	
25	Wednesday	Christmas Day. Library closed.
26	Thursday	
27	Friday	
28	Saturday	
29	**SUNDAY**	
30	Monday	
31	Tuesday	

JANUARY, 1919

1	Wednesday	
2	Thursday	
3	Friday	Meeting of Faculty of Arts.
4	Saturday	Meeting of Faculty of Medicine.
5	**SUNDAY**	
6	Monday	Lectures resumed in all Faculties. Meeting of Faculty of Applied Science.
7	Tuesday	
8	Wednesday	
9	Thursday	Finance Committee.
10	Friday	
11	Saturday	First term lectures end in Arts, Law and Applied Science.
12	**SUNDAY**	
13	Monday	First Term Examinations in Arts, Law and Applied Science begin.
14	Tuesday	
15	Wednesday	
16	Thursday	
17	Friday	
18	Saturday	
19	**SUNDAY**	
20	Monday	Second Term begins in Arts, Law and Applied Science. Engineering Building Committee. Chemistry and Mining Building Committee.
21	Tuesday	
22	Wednesday	
23	Thursday	
24	Friday	
25	Saturday	
26	**SUNDAY**	
27	Monday	Meeting of Governors.
28	Tuesday	
29	Wednesday	
30	Thursday	
31	Friday	

FEBRUARY, 1919.

1	Saturday	Meeting of Faculty of Medicine.
2	**SUNDAY**	
3	Monday	Meeting of Faculty of Applied Science.
4	Tuesday	
5	Wednesday	
6	Thursday	Physics Building Committee.
7	Friday	Meeting of Faculty of Arts.
8	Saturday	
9	**SUNDAY**	
10	Monday	Museum Committee. Library Committee.
11	Tuesday	
12	Wednesday	Regular Meeting of Corporation.
13	Thursday	Finance Committee.
14	Friday	
15	Saturday	
16	**SUNDAY**	
17	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
18	Tuesday	
19	Wednesday	
20	Thursday	
21	Friday	
22	Saturday	
23	**SUNDAY**	
24	Monday	Physics and Engineering Buildings opened, 1893. Meeting of Governors.
25	Tuesday	
26	Wednesday	
27	Thursday	
28	Friday	

MARCH, 1919.

1	Saturday	Meeting of Faculty of Medicine.
2	**SUNDAY**	
3	Monday	Meeting of Faculty of Applied Science.
4	Tuesday	
5	Wednesday	Ash Wednesday. No lectures.
6	Thursday	
7	Friday	Meeting of Faculty of Arts.
8	Saturday	
9	**SUNDAY**	
10	Monday	
11	Tuesday	
12	Wednesday	
13	Thursday	Finance Committee.
14	Friday	
15	Saturday	
16	**SUNDAY**	
17	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
18	Tuesday	
19	Wednesday	
20	Thursday	
21	Friday	
22	Saturday	
23	**SUNDAY**	
24	Monday	Meeting of Governors.
25	Tuesday	
26	Wednesday	
27	Thursday	
28	Friday	
29	Saturday	
30	**SUNDAY**	
31	Monday	

APRIL, 1919.

1	Tuesday	
2	Wednesday	
3	Thursday	Physics Building Committee.
4	Friday	Meeting of Faculty of Arts.
5	Saturday	Macdonald Engineering Building burned, 1907. Meeting of Faculty of Medicine.
6	**SUNDAY**	
7	Monday	Meeting of Faculty of Applied Science. Library Committee. Museum Committee.
8	Tuesday	
9	Wednesday	Regular Meeting of Corporation.
10	Thursday	Finance Committee.
11	Friday	
12	Saturday	Second Term Lectures end in Arts, Law and Applied Science.
13	**SUNDAY**	
14	Monday	
15	Tuesday	
16	Wednesday	Medical Building burned, 1907. Sessional Examinations in Arts, Law and Applied Science begin. Last day for receiving theses for higher degrees
17	Thursday	
18	Friday	Good Friday. No lectures. Library closed.
19	Saturday	
20	**SUNDAY**	Easter Sunday.
21	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
22	Tuesday	
23	Wednesday	
24	Thursday	
25	Friday	
26	Saturday	
27	**SUNDAY**	New Engineering Building opened, 1909.
28	Monday	Meeting of Governors.
29	Tuesday	
30	Wednesday	

MAY, 1919.

1	Thursday	
2	Friday	Meeting of Faculty of Arts.
3	Saturday	Meeting of Faculty of Medicine.
4	**SUNDAY**	
5	Monday	Meeting of Faculty of Applied Science.
6	Tuesday	
7	Wednesday	
8	Thursday	Finance Committee.
9	Friday	
10	Saturday	
11	**SUNDAY**	
12	Monday	Convocation for Conferring Degrees in Arts, Law and Applied Science.
13	Tuesday	
14	Wednesday	
15	Thursday	
16	Friday	
17	Saturday	
18	**SUNDAY**	
19	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
20	Tuesday	
21	Wednesday	
22	Thursday	
23	Friday	
24	Saturday	Victoria Day.
25	**SUNDAY**	
26	Monday	Meeting of Governors.
27	Tuesday	
28	Wednesday	
29	Thursday	
30	Friday	
31	Saturday	

JUNE, 1919.

1	**SUNDAY**	
2	Monday	
3	Tuesday	
4	Wednesday	
5	Thursday	New Medical Building opened, 1911. Physics Building Committee.
6	Friday	
7	Saturday	Meeting of Faculty of Medicine.
8	**SUNDAY**	
9	Monday	Museum Committee. Library Committee.
10	Tuesday	
11	Wednesday	Regular Meeting of Corporation.
12	Thursday	Finance Committee.
13	Friday	
14	Saturday	
15	**SUNDAY**	
16	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
17	Tuesday	
18	Wednesday	
19	Thursday	
20	Friday	
21	Saturday	
22	**SUNDAY**	
23	Monday	Meeting of Governors.
24	Tuesday	
25	Wednesday	
26	Thursday	
27	Friday	
28	Saturday	
29	**SUNDAY**	
30	Monday	

JULY, 1919.

1	Tuesday	Dominion Day.
2	Wednesday	
3	Thursday	
4	Friday	Gift of Frothingham, Molson, and Law Properties by Sir Wm. Macdonald, 1911.
5	Saturday	
6	**SUNDAY**	
7	Monday	
8	Tuesday	
9	Wednesday	
10	Thursday	
11	Friday	
12	Saturday	
13	**SUNDAY**	
14	Monday	
15	Tuesday	
16	Wednesday	
17	Thursday	
18	Friday	
19	Saturday	
20	**SUNDAY**	
21	Monday	
22	Tuesday	
23	Wednesday	
24	Thursday	
25	Friday	
26	Saturday	
27	**SUNDAY**	
28	Monday	
29	Tuesday	
30	Wednesday	
31	Thursday	

AUGUST, 1919

1	Friday	
2	Saturday	
3	**SUNDAY**	
4	Monday	
5	Tuesday	
6	Wednesday	
7	Thursday	
8	Friday	
9	Saturday	
10	**SUNDAY**	
11	Monday	
12	Tuesday	
13	Wednesday	
14	Thursday	
15	Friday	
16	Saturday	Peter Redpath Museum opened, 1882.
17	**SUNDAY**	
18	Monday	
19	Tuesday	
20	Wednesday	
21	Thursday	
22	Friday	
23	Saturday	
24	**SUNDAY**	
25	Monday	
26	Tuesday	
27	Wednesday	
28	Thursday	
29	Friday	
30	Saturday	
31	Sunday	

McGill University.

HISTORY AND CONSTITUTION.

FOUNDATION AND EARLY HISTORY.

McGill University owes its origin to a private endowment. It was founded by the Hon. James McGill, a leading merchant and public-spirited citizen of Montreal, who died in 1813. By his will, dated January 8th, 1811, he bequeathed his property of Burnside (consisting of 46 acres of land with the dwelling house and other buildings thereon) and a sum of £10,000 in money to found a college in a provincial university, the erection of which had already been provided for by the British Government. The four trustees appointed under his will were directed to convey the property of the bequest to the Royal Institution for the Advancement of Learning, a body which, in 1802, had been incorporated by the Legislature "for the establishment of free schools and the advancement of learning" in the Province of Quebec. The conditions upon which the property was to be transferred to the Royal Institution for the Advancement of Learning were, mainly, that that Institution should, within ten years after the testator's decease, erect and establish on his Burnside estate "a University or College, for the purposes of education and the advancement of learning in this Province," and that the college, or one of the colleges in the University, if established, should "be named and perpetually be known and distinguished by the appellation of McGill College." Owing to persistent opposition by the leaders of one section of the people to any system of governmental education and to the refusal by the Legislature to make the grants of land and money which had been promised, the proposed establishment of the provincial university by the British Government was abandoned.

In so far as the McGill College was concerned, however, the Royal Institution at once took action by applying for a Royal Charter. Such a charter was granted in 1821, and the Royal Institution prepared to take possession of the estate, but, owing to protracted litigation, this was not surrendered to them till 1829, when the work of teaching was begun in two faculties, Arts and Medicine. The record of the first thirty years of the University's existence is an

unbroken tale of financial embarrassment and administrative difficulties. The charter was cumbrous and unwieldy, and unsuited to a small college in the circumstances of this country, and the University, with the exception of its medical faculty, became almost extinct. But after thirty years the citizens of Montreal awoke to the value of the institution which was struggling in their midst. Several gentlemen undertook the responsibility of its reorganization, and, in 1852, an amended charter was secured. The Governor-General of Canada for the time being, Sir Edmund Head, became interested in its fortunes, and in 1855, with the advent of a new Principal, an era of progress and prosperity began.

A course in Law was begun in connection with the Faculty of Arts, in 1848, and the department was established as a separate faculty in 1853. The Faculty of Applied Science was not regularly organized till 1878, but a course in Engineering, which was amplified into the Department of Practical Science in 1871, was given under the Faculty of Arts as far back as 1856. The Faculty of Agriculture was established in 1907.

Principal Dates in the History of the University.

First Charter obtained—1821.
College opened.—1829.
Amended Charter secured.—1852.
William Molson Hall opened.—October 10th, 1862.
Peter Redpath Museum opened.—August 16th, 1882.
Physics and Engineering Buildings opened.—February 24th, 1893.
Redpath Library opened.—October 31st, 1893.
Chemistry and Mining Building opened.—December 20th, 1898.
Royal Victoria College opened.—September 4th, 1899.
Strathcona Medical Buildings opened.—September 18th, 1901.
Conservatorium of Music opened.—October 14th, 1904.
Macdonald Engineering Building burned.—April 5th, 1907.
Medical Building burned.—April 16th, 1907.
Macdonald College opened.—November 5th, 1907.
New Engineering Building opened.—April 27th, 1909.
New Medical Building opened.—June 5th, 1911.

Gift of Frothingham, Molson, and Law properties (comprising about 25 acres), from Sir William C. Macdonald.—July 4th, 1911.

One million five hundred thousand dollars raised (chiefly from Montreal citizens) in aid of the funds of the University.—November 20-24, 1911.

Gift of $1,000,000 from the Carnegie Corporation, New York, "in recognition of the noble and devoted service and sacrifice of McGill towards Canada's part in the Great War."—February 25th, 1918.

GOVERNMENT OF THE UNIVERSITY.

By the amended Charter "the Governors, Principal, and Fellows" of the University are constituted a body politic and corporate, with all the usual rights and privileges of corporate bodies. The supreme authority, however, is vested in the Crown, and is exercised by His Excellency the Governor-General of Canada, for the time being, as **Visitor**. This is a special and important feature of the constitution, for, while it gives the University an imperial character and removes it at once from any merely local or party influence, it secures the patronage of the head of the political system of the country.

The **Governors** of the University are the members of the Royal Institution for the Advancement of Learning, above mentioned, and in them are vested the management of finances, the passing of University statutes and ordinances, the appointment of professors, and other important duties. Their number is limited to twenty-five, and vacancies are filled by the nomination of the remaining members with the approval of the Visitor. The President of the Board of Governors is, *ex-officio,* Chancellor of the University.

The **Principal** is the academic head and chief administrative officer. He is appointed by the Board of Governors (of which body he is a member *ex-officio*). He also holds the office of Vice-Chancellor of the University.

The **Fellows** (42 in number) are selected with reference to the representation of all the faculties and departments of the University, and of the graduates, affiliated colleges, and other bodies.

The Governors, Principal and Fellows together, constitute the **Corporation**, the highest academical body. Its powers are fixed by statute, and include the framing of all regulations touching courses of study, matriculation, graduation, discipline and the granting of degrees.

The administration of these regulations, along with direct responsibility for the conduct of the educational work of the University, is entrusted to the several **Faculties**,—Arts, Medicine, Law, Applied Science, and Agriculture.

The Principal, the Deans of the several Faculties, the Professors and Associate Professors, and other members, not exceeding ten in number, of the teaching staff, constitute the **Academic Board** of the University, with the duty of considering such matters as pertain to the interests of the University as a whole, and of making recommendations concerning the same.

INCORPORATED AND AFFILIATED COLLEGES

INCORPORATED COLLEGES.

Macdonald College is situated at Ste. Anne de Bellevue, about twenty miles from Montreal. It consists of three departments:—The School of Agriculture, the School of Household Science, and the School for Teachers. Courses leading to the Bachelor's and Master's degrees in agriculture are under the control of the Corporation of McGill University; all the short term courses in agriculture, as well as the courses in domestic science, are under the direction of the Macdonald College Committee; and those for diplomas to teach in the Province of Quebec are subject to the immediate supervision of the Teachers' Training Committee. Further information is given on page 320, and full details as to the college buildings, courses, terms of admission, fees, etc., will be found in the Macdonald College Announcement, which will be sent on application to the Principal, Macdonald College, Que.

The Royal Victoria College is the women's college of McGill University for courses in the Faculty of Arts. For further particulars, see page 313.

AFFILIATED COLLEGES.

Acadia, Alberta and Mount Allison Universities and **the University of St. Francois Xavier College** are affiliated to McGill University to the extent that students who have completed the two-year course in Engineering given by these universities are admitted directly to the third year in the courses of Civil Engineering, Mining Engineering, Metallurgical Engineering, Chemical Engineering, Mechanical Engineering, and Electrical Engineering of the Faculty of Applied Science of this University.

Students from these universities entering the third year in either of the first two of these courses must take the summer school in surveying, which opens in 1918 on September 2nd; those entering the third year in Metallurgical Engineering or Chemical Engineering will take the summer course in chemistry.

Students from these universities entering the courses in Mechanical or Electrical Engineering are advised to take the summer school in mechanical drawing, physics and shopwork, which opens on September 2nd, but they are not required to do so.

Alberta University is also affiliated in the Faculty of Medicine, students who have completed the third year in the Medical course there being admitted directly to the fourth year in the Faculty of Medicine of this University.

Royal Military College.—Graduates of the Royal Military College of Kingston are admitted to the third year in the several departments of the Faculty of Applied Science above mentioned. They must in all cases take the respective summer schools pertaining to these several courses, which summer schools open in 1918, on September 2nd.

AFFILIATED THEOLOGICAL COLLEGES.

The Theological Colleges named below are affiliated to the University under the following arrangements:—Students in these institutions who are pursuing a double course in Arts and Theology (six years at least) will be exempted from a half course in Arts in each of the third and fourth years or a whole course in either.

The Congregational College of Canada, Montreal.—Acting Principal, Rev. W. H. Warriner, M.A., D.D., 58 McTavish St.

The Diocesan College of Montreal.—Principal, Rev. E. I. Rexford, M.A., LL.D., 743 University St.

The Presbyterian College, Montreal, in connection with the Presbyterian Church in Canada.—Principal, Rev. D. J. Fraser, M.A., LL.D., D.D., 67 McTavish St.

The Wesleyan College of Montreal.—Principal, Rev. James Smyth, LL.D., 760 University St.

A movement was inaugurated in the session 1912-13 for a large measure of co-operation among the above Colleges, with the result that a considerable portion of the work which has hitherto been done separately is now taken in joint classes.

For Calendars and all necessary information, apply to the Principals of the several Colleges.

AFFILIATION TO OTHER UNIVERSITIES.

The University is affiliated to the universities of Oxford, Cambridge and Dublin, under conditions which allow an under-graduate who has taken two years' work, and has passed the second year sessional examination in Arts, to pursue his studies and take his degree at any of these universities on a reduced period of residence.

Arrangements have also been made whereby graduates and students of the Mechanical Science course in the University of Cambridge will be admitted to advanced standing in the Faculty of Applied Science under definite regulations, particulars of which can be obtained from the Dean of the Faculty.

FACULTIES AND COURSES.

The educational work of the University is carried on in McGill College, the Royal Victoria College for Women, and other University buildings in Montreal; and also in Macdonald College at Ste Anne de Bellevue.

COURSES FOR DEGREES AND DIPLOMAS.

The several courses offered by the University are as follows:—

In the Faculty of Arts.

For the degree of Bachelor of Arts.
" " " " Bachelor of Science.
" " " " Bachelor of Commerce.

The undergraduate courses of study which lead to the degree of B.A. or of B.Sc., extend over four sessions of about seven and a half months each. In the second, third and fourth years extensive options are provided, and certain exemptions are also allowed to professional students. (See also pages 113 to 115.)

Three new courses have been established, one leading to the degree of Bachelor of Science in Agriculture, with the privilege of qualifying for an Academy Diploma; another to the degree of Bachelor of Household Science, and the third to the degree of Bachelor of Laws. The first two years are taken in the Faculty of Arts and the last two in the Faculty of Agriculture, or the School of Household Science, or the Faculty of Law, as may be required. Details of the first two courses will be found in the Macdonald College Announcement, and of the last under "Faculty of Law," page 248.

The undergraduate course in Arts can be taken along with the undergraduate course in Medicine, in seven years, or with that in Applied Science, in six years. (See pp. 113 and 114.)

Full particulars regarding the course for the degree of Bachelor of Commerce are given on pages 150 to 167.

The courses in Arts are open to women (who are educated mainly in separate classes) on equal terms with men. Residential accommodation for women students is provided in the Royal Victoria College. (For further particulars, see page 313.)

Holders of the degree of B.A. from this University are admitted to the study of the learned professions, without preliminary examin-

ation, in the different provinces of Canada, and in Great Britain and Ireland, and elsewhere. They will also be granted Academy Diplomas to teach in the Province of Quebec, provided they have passed an examination in pedagogy and have taught, under supervision, for the time required by law.

In the Faculty of Applied Science.

For the degree of Bachelor of Architecture (B. Arch.).

For the degree of Bachelor of Science (B.Sc.), in the departments of Chemistry, Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering, Metallurgy, Metallurgical Engineering, and Mining Engineering.

The undergraduate courses of study for the degree of B.Sc. extend over four sessions, averaging (with summer sessions) about eight months each, and provide a thorough professional training in the departments mentioned above. The course for the degree of B. Arch. extends over five years. Full particulars are given on pages 169 to 246.

The undergraduate course in Arts can be taken along with the undergraduate course in Applied Science, in six years. (See page 113.)

In the Faculty of Law.

For the degree of Bachelor of Civil Law (B.C.L.)
" " " " Bachelor of Laws (LL.B.)

The undergraduate course for the degree of B.C.L. extends over three sessions of eight months each, and that for the degree of LL.B. over four of the same length, the first two years being spent in the Faculty of Arts and the last two in the Faculty of Law. (Full particulars are given on pp. 247 to 261.)

In the Faculty of Medicine.

For the degree of Doctor of Medicine and Master of Surgery (M.D., C.M.).

For the degree of Doctor of Dental Surgery (D.D.S.).

For the Diploma of Public Health.

For the Diploma of Pharmacy.

The undergraduate course of study leading to the degree of M.D., C.M., extends over five sessions of eight months each, and that leading to the degree of Doctor of Dental Surgery covers four sessions of the same length. For further information, see pages 262 to 290.

The undergraduate course in Arts can be taken along with the undergraduate course in Medicine in seven years. (See page 114.)

The course in Public Health and Sanitary Science is open to those only who have graduated in Medicine, or who possess some other qualification for practice. Generally speaking, it occupies a period of eight months.

In the Graduate School.

For the degrees of Master of Arts, Master of Science, Master of Laws, and Doctor of Philosophy.

Full information as to admission and departments in which studies are offered will be found on page 304, and can also be obtained from the Chairman or Secretary of the Committee on Graduate Studies, to which Committee are also submitted all applications for the degrees of D.Sc., D. Litt. and D.C.L. The Chairman of the Committee is Professor James Harkness.

In Macdonald College.

For the degree of Bachelor of Science in Agriculture (two courses.)

Other courses in the School of Agriculture.

For the degree of Bachelor of Household Science. (Two years in Arts, and two in the School of Household Science.)

Other courses in the School of Household Science.

The several courses for teachers' diplomas.

The course of study for the degree of Bachelor of Science in Agriculture extends over four sessions of about eight months each. It aims to provide a thorough theoretical and practical training in the several branches of the science. (See also page 320.)

The Macdonald College announcement, containing full details as to buildings, courses, terms of admission, fees, etc., can be obtained from the Principal, Macdonald College P. O., Que.

In the Conservatorium of Music.

For the degrees of Bachelor of Music (Mus. Bac.) and Doctor of Music (Mus. Doc.).

For the Diploma of Licentiate in Music, and the several Grade examination certificates.

Students are admitted as *Regular Students* taking an organized course leading to the Diploma of Licentiate in Music or the degree of Bachelor of Music (see page 291), or as *Partial Students*, who, under certain conditions and after examination, can obtain certificates bearing the imprimatur of the University. Full details can be obtained on application to the Secretary of the McGill Conservatorium of Music, 323 Sherbrooke street west, Montreal.

The Course for the First Class Academy Diploma of the Province of Quebec.

Certain courses are given by the Department of Education, which when supplemented by practice teaching and observation (except in the case of holders of the Model Diploma) lead to a First Class Academy Diploma on graduation. (See page 148.)

This diploma can also be obtained by those who qualify for the degree of B.S.A. by taking two years in Arts, followed by two in the Faculty of Agriculture. (See Macdonald College announcement.)

Extension Courses.

Evening lectures on a variety of subjects. Particulars will be found on pages 162 to 167.

DEGREES.

The degrees conferred by the University are as follows:—B.A.; B.Sc.; B. Arch.; B.C.L.; LL.B.; B.S.A.; Mus. Bac.; B. Com.; M.D., C.M.; D.D.S.; M.A.; M.Sc.; LL.M.; Mus. Doc.; D.C.L.; Ph.D; D.Sc.; D. Litt.; and LL.D. (Honorary).

I. LOWER DEGREES.

In order to obtain the degrees of B.A.; B.Sc.; B. Arch.; B.C.L.; LL.B.; B.S.A.; B.Com.; B.H.S.; M.D., C.M.; and D.D.S., students are required to attend lectures (for length of courses, see pages 36 to 38), to complete the course of study for the degree sought, to pass all the prescribed examinations during the course, and any special examination for graduation, and to perform such other exercises as may be prescribed to that end.

The requirements for degrees in Music are stated on page 292.

II. HIGHER DEGREES.

All theses for higher degrees, in order to be accepted, must be sent to the Chairman of the Committee on Graduate Studies before April 16th, 1919. The examination will be held in April. No thesis will be received, or examination granted, until the fee for the degree has been paid.

Degree of M.A.

For requirements, see under "Graduate School," page 304.

Degree of M.Sc.

For requirements, see under "Graduate School," page 306.

Degree of LL.M. (Master of Laws).

For requirements, see under "Graduate School," page 307.

Degree of D.Litt.

Candidates for the degree of Doctor of Literature must be Masters of Arts, and graduates of at least five years' standing, who shall have distinguished themselves by special research and learning in the domain of literature or philosophy. They are required to present a satisfactory thesis or published work.

Degree of D.Sc.

Candidates for the degree of Doctor of Science must be Masters of Arts, or Masters of Science, or Doctors of Medicine, and graduates of at least five years' standing, who shall have distinguished themselves by special research and learning in the domain of science. They are required to present a satisfactory thesis or published work.

Degree of Ph.D.

For requirements, see under "Graduate School," page 307.

Degree of D.C.L. (Doctor of Civil Law).

For requirements, see under "Graduate School," page 308.

Degree of LL.D.

The degree of Doctor of Laws is given only as an honorary degree.

III. ADMISSION "AD EUNDEM GRADUM."

The following are the regulations applicable to admission *ad eundem gradum*:—

Extract from the Statutes, Chap. VIII.

"Graduates of other universities desirous of admission to the "like degree in this University, may be so admitted by the Corpor- "ation; due enquiry being first made as to their moral character and "sound learning, and opportunity given to the several Faculties, or "the Committee on Graduate Studies, as may be required, to make "such representation in the premises as they may see fit. Provided "always that, except in the case of candidates proceeding to a higher "degree, such application for admission shall not be put to vote until "after three months' notice, unless by unanimous consent, and shall "not be ordered, if as many as five members of the Corporation shall "vote against it."

Extracts from the Regulations of the Corporation.

"In all cases in which anyone is proposed for an *ad eundem* "degree, it shall be necessary for the member or members of the "Corporation making such proposal, to state in writing therewith "the grounds upon which the granting of such degree is advocated, "and when the case shall be referred to the Faculties, under Chap. "VIII. of the Statutes, copies of such proposal and grounds shall

"be transmitted to the Faculties by the Registrar for their con-
"sideration."

Note. In considering applications under the above regulations, the Faculties will require as "grounds" the pursuit of a course of study or research in this University; association with the academic work of the University; or similar qualifications.

Admission "ad eundem gradum" is not granted merely as a titular distinction.

"The degree of Bachelor of Arts or Bachelor of Science, *ad "eundem,* shall be granted only to candidates who are proceeding to "a higher degree, the lower degree being granted only when the "candidate has qualified for the higher."

"Graduates of other universities desiring an *ad eundem* degree "of this University, as a condition of entering on a course of study "leading to a higher degree, shall make application to the Committee "on Graduate Studies, who shall immediately take action without "previous reference to the various Faculties or to Corporation."

ENTRANCE REQUIREMENTS.

All matters regarding matriculation are under the control of a Matriculation Board appointed by the Corporation of the University.

JUNIOR MATRICULATION.

I. REGULATIONS.

1. Matriculation examinations (for entrance into all Faculties) are held only in June and September—in June at McGill College and at the local centres named below; in September, at McGill College, and at the following centres if a sufficient number apply:—Calgary, Regina, Winnipeg, Toronto, St. John and Truro.

ALL INQUIRIES RELATING TO THE EXAMINATIONS SHOULD BE ADDRESSED TO THE REGISTRAR OF THE UNIVERSITY.

For the convenience of candidates in Great Britain, who are not otherwise qualified for entrance, an examination will be held regularly in London, Eng., each year, commencing on or about the 12th of June. Full information regarding the exact date of the examination, fee, etc., may be obtained from the Honorary Representative of the University, W. A. Bulkeley-Evans, Esq., M.A., Secretary Headmasters' Conference, 12 King's Bench Walk, Temple, London, E.C.

2. Every candidate for examination is required to fill up an application form and return the same with the necessary fee (for which see page 46) one month before the examination begins. Blank forms may be obtained from the Registrar.

In centres where not more than four candidates are writing, the fee for each will be determined by the Registrar.

No application for examination in June will be received after May 20th.

3. Examinations will be held in June at the following centres, outside of the Province of Quebec, if a sufficient number of candidates apply:—Sydney, N.S.; Rothesay, N.B.; Ottawa, Ont.; Brockville, Ont.; Port Hope, Ont.; Toronto, Ont.; Hamilton, Ont.; St. Catharines, Ont.; Winnipeg, Man.; Regina, Sask.; Calgary, Alta.; Kingston, Jamaica, and London, Eng.

Candidates who are not within easy reach of any of the above centres are advised to prepare for entrance by taking an examination recognized by the University, as shown on pages 45 and 46.

4. The matriculation examination may be taken in two parts, but in order to be valid for entrance it must be completed within two years from the date of the first attempt. Credit will not be given for less than four papers passed at one time*, except in the case of those who are not required to take as many as four papers to complete the examination; nor will credit be given for less than four papers on certificates which may be presented for exemption from the examination, and no certificate will be accepted which has been obtained under easier conditions than those which are imposed on candidates who are attempting to qualify for entrance by taking the regular University examination.

5. Candidates will not be considered as having passed in any subject unless they obtain at least 50 per cent. of the maximum marks in that subject (in subjects in which two papers are set, 50 per cent. on the two and not less than 40 in either, and this only when the two papers are taken at the same examination).

This regulation applies also in the case of certificates.

6. Candidates for admission to the Faculties of Arts, Applied Science, Law, Agriculture and the Department of Music who have failed to complete the matriculation requirements will be allowed to enter the first year as conditioned undergraduates, provided (a) that they have not failed in more than two papers (which cannot both be in the mathematical section nor in two languages) and (b) that they have obtained at least 25 per cent. in the subjects in which they have failed and 50 per cent of the aggregate.†

This regulation applies also to candidates who seek to satisfy the matriculation requirements by means of certificates granted by other recognized examining bodies.

In order to be admitted to the Faculty of Medicine, a candidate must pass in every subject required.

Students who are conditioned in a language must attend a special tutorial class during their first session, for which a fee of $10.00 is exigible. Any student so conditioned who fails to attend this class with regularity will not be allowed to present himself for examination.

7. Matriculation certificates will be issued to candidates who have passed the entrance examination conducted by the University, but not to those who have qualified by means of certificates, except when the greater part of the requirements has been satisfied by passing the University examination.

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* For the purpose of this regulation the June and September examinations of the same year will be considered as "one time."

† See, however, for French, page 102.

8. The certificates and diplomas named below will, if submitted to the Registrar, be accepted *pro tanto* in lieu of the junior matriculation examination, *i.e.*, in so far as the subjects and standard of the examination taken to obtain them are, to the satisfaction of the Matriculation Board, equivalent to those required for the matriculation examination of this University. Candidates offering certificates which are not a full equivalent will be required to pass the matriculation examination in such of the necessary subjects as are not covered thereby.

Intending students who wish to enter by certificates should under no circumstances come to the University without having first obtained from the Registrar a statement of the value of the certificates they hold, as many of these lack one or more essential subjects, or the work done in a subject may not be adequate, or again, the percentage gained may not be sufficiently high (see regulation 5). Moreover, it must be remembered that a certificate may admit to one Faculty and not to another. When a diploma or certificate does not show the marks obtained in the several subjects of the examination, it must be accompanied by an official statement containing this information.

Province of Quebec.

The University School Leaving Certificate.
The Model School Diploma.

Province of Ontario.

Certificates of admission to the Normal School.
Junior Matriculation Certificates.

Province of New Brunswick.

First Class, Superior and Grammar School Licenses.
Grade XI and XII Certificates.

Province of Nova Scotia.

The Leaving Certificate of Grade XI.

Province of Prince Edward Island.

First Class Teachers' Licenses.
Second Year Certificates of Prince of Wales College.

Province of British Columbia.

Intermediate Grade Certificates.

Province of Manitoba.

Second Class Teachers' Certificates.

Provinces of Alberta and Saskatchewan.

The Departmental Certificate of Standard XI.

Newfoundland.

Associate Grade Certificates.

United States.

Certificates granted by the College Entrance Examination Board, and by the New York State Board of Regents.

Great Britain.

The holder of a Higher Certificate or a School Certificate of the Oxford and Cambridge Schools Examination Board, of the Senior Certificate of the Oxford or Cambridge Board of Examiners, of a First Class Certificate of the College of Preceptors or of a Higher Examination Certificate of the Scotch and Welsh Educational Departments is entitled to exemption from the matriculation examination, *pro tanto*, if the candidate has at one and the same examination passed in certain specified subjects.

Applications for exemption from the matriculation examination, based upon certificates of having passed examinations other than those above mentioned, will be considered as occasion may require. Every such application must be accompanied by certificates and full particulars, and should be addressed to the Registrar.

II. MATRICULATION EXAMINATION FEES.

For an examination in six or more papers..... $7.00

(For examination at a local centre where not more than four candidates are writing the fee will be determined by the Registrar.)

For an examination in from three to five papers..... 4.00
For an examination in one or two papers..... 2.00

For examination of certificates, in respect of which candidates are exempted from the whole of the matriculation examination 2.00

Matriculation examination fees must be sent to the University Registrar at the time of application for the examination. No application will be accepted unless accompanied by the regular fee.

Certificates will be issued to successful candidates without additional fee.

III. SUBJECTS OF EXAMINATION.

Faculty of Arts.

For candidates intending to take the B.A. course.

1. **English** (two papers).
2. **History** (one paper).
3. **Latin** *or* **Greek** (two papers).
4. One of the following (two papers in each):
   Greek *or* **Latin** (the one not already chosen).
   French, German.
5. **Elementary Mathematics** [**Algebra** (one paper) and **Geometry** (one paper).]
6. One of the following:
   Botany, Chemistry, Physics (one paper); a **Language** not already chosen (two papers).

For candidates intending to take the B.Sc. course in Arts, or the course leading to the degree of Bachelor of Science in Agriculture (two years in Arts and two in Agriculture).

1. **English** (two papers).
2. **History** (one paper).
3. **Elementary Mathematics** [**Algebra** (one paper) and **Geometry** (one paper).]
4. **French** (two papers).
5. **Latin** *or* **German** (two papers) *or* **Physics** (one paper).
6. One of the following:
   Botany, Chemistry, Physics—if not already chosen (one paper); **Latin,** if not already chosen (two papers); **Greek** (two papers).

Candidates who intend ultimately to proceed to the study of medicine are reminded that for medical registration it is necessary to take Latin.

For candidates entering on the course for the Degree of Bachelor of Commerce.

One of the following examinations:—

(1) The ordinary matriculation examination for the B.A., or the B.Sc. Course.

(2) An examination on the following subjects:—

1. **English** (two papers).
2. **History** (one paper).
3. **French**, including oral examination (two papers).
4. **Elementary Mathematics** [**Algebra** (one paper), and **Geometry** (one paper).]
5. One of the following, viz:
   Botany, Chemistry, Physics (one paper).

Holders of Model Diplomas who are certified by the Dean of the School for Teachers of Macdonald College to have taken 75 per cent. of the total marks at their final examinations, with not less than 50 per cent. of the marks in (1) mathematics, (2) French, and (3) Latin or Greek, respectively, will be admitted without further examination as undergraduates of the first year in Arts.

Faculty of Applied Science.

(For all courses leading to the Degree of B.Sc. in the different branches of Engineering.)

1. **English** (two papers).
2. **History** (one paper).
3. One of the following:
   French, German, Latin, Greek (two papers).
4. **Elementary Mathematics** [**Algebra** (one paper), and **Geometry** (one paper).]
5. **Advanced Mathematics** [**Algebra** (one paper) and **Geometry** and **Trigonometry** (one paper).]
6. One of the following:
   Botany, Chemistry, Physics (one paper), a **Language** not already chosen (two papers).

(For the course leading to the Degree of B. Arch.)

1. **English** (two papers).
2. **History** (one paper).
3. **French** (two papers).
4. **Elementary Mathematics** [**Algebra** (one paper), and **Geometry** (one paper).]
5. **Advanced Mathematics** [**Algebra** (one paper), and **Geometry** and **Trigonometry** (one paper).]
6. One of the following:
   Greek, Latin, German (two papers), **Chemistry, Physics** (one paper).
7. **Freehand and Geometrical Drawing.**

In the case of No. 7, applicants may send specimens of their work to the Head of the Department or take an examination at the time of the regular matriculation examination in September. No examinations taken elsewhere are accepted as equivalents for this subject.

No student will be admitted to the Department of Architecture as an undergraduate, until he has satisfied the matriculation requirements in drawing.

Faculty of Medicine and Department of Dentistry.

1. **English** (two papers).
2. **History** (one paper).
3. **Latin** (two papers).
4. **Elementary Mathematics** [**Algebra** (one paper), and **Geometry** (one paper).]
5. **Chemistry** (one paper).
6. **Physics** (one paper).
7. One of the following:
   Greek, French, German (two papers).

In addition to the certificates mentioned on pages 45 and 46, the following are accepted *pro tanto* in lieu of the matriculation examination in this Faculty:

The degree of Bachelor of Arts obtained from any recognized university.

A certificate of having passed the examination of a Provincial Medical Council.

In the case of candidates from the United States, a certificate of having passed a State or University examination.

No candidate will be admitted to the Faculty of Medicine without having satisfied all the matriculation examination requirements.

Those who intend to practise medicine in any of the Provinces of Canada will obtain information regarding registration and admission to study by corresponding with the Registrars of the several Provincial Medical Councils. (For names, see page 264.)

Particulars regarding the requirements for the admission of women to the Faculty of Medicine can be obtained from the University Registrar.

Faculty of Law.

1. **English** (two papers).
2. **History** (one paper).
3. **Latin** (two papers).
4. **French** (two papers).
5. **Elementary Mathematics** [**Algebra** (one paper), and **Geometry** (one paper).]
6. One of the following:
   Botany, Chemistry, Physics (one paper), **Greek, German** (two papers).

In addition to those who qualify on the certificates mentioned on pages 45 and 46, Bachelors of Arts, Science, or Letters of any Canadian or British University are admitted without examination.

Candidates who intend to practise law or to be admitted to the notarial profession in the Province of Quebec are referred to the

statutory requirements as shown on page 257. If they are not graduates they should pass the examination for admission to study required by the Council of the Bar or by the Board of Notaries, as the case may be, before seeking to enter. In that case they will be admitted without examination.

Faculty of Agriculture.

(*For the course leading to the Degree of B.S.A.*)

1. **English** (two papers).
2. **History** (one paper).
3. **Latin** *or* **French** *or* **German** (two papers).
4. **Elementary Mathematics** [**Algebra** (one paper), and **Geometry** (one paper).]
5. **Nature Study** and **Elementary Agriculture.**
6. Any one of the following:
   Botany, Chemistry, Physics, Zoology (one paper).

A matriculation certificate for entrance to any other Faculty of the University will also be accepted, but in addition the candidate will be required to pass in nature study and elementary agriculture.

For the next two or three years, however, candidates for the degree will be allowed to proceed on satisfying the following conditions:—

(1) Pass before entrance in English grammar, history and geography, arithmetic, English composition, nature study and elementary agriculture.

(2) Obtain 60 per cent. of the marks in English and 50 per cent. in general proficiency in an examination on the work of the Two-Year Course, and be granted the permission of the Faculty to continue.

Department of Music.

(*For the course leading to the Degree of Bachelor of Music.*)

1. **English Grammar** (one paper).
2. **History** and **Geography** (one paper).
3. **Arithmetic** (one paper).
4. **English** (two papers).
5. **French** *or* **German** *or* **Italian** (two papers).
6. **Rudiments of Music** (musical intervals, scales, clefs, time signatures, construction of chords, elementary harmony to chord of dominant seventh (one paper).

   Optional:—Elementary Mathematics (Algebra, and Geometry). A pass in either, or both, of these papers will help to make up for deficiency in any others.

IV. REQUIREMENTS IN EACH SUBJECT.

English Grammar.*

Main facts in connection with the history of the language; etymology and syntax. A good knowledge of parsing and analysis is essential. West's English Grammar for Beginners, or Lang's Advanced Grammar (Copp, Clark Co.) is recommended as a text-book.

One examination paper of two hours.

Arithmetic.*

All the ordinary rules, including square root, and a knowledge of the metric system.

One examination paper of two hours.

History and Historical Geography.

The Groundwork of British History, editors Warner and Marten (Blackie & Sons, Edinburgh), Sec. III, from 1714 to 1911; Canadian History (Grant), 1763 to date.

For candidates outside of Canada an option will be allowed in this subject on British History from 1485 to 1911, same text-book as is prescribed above, Secs. II and III.

The geography required will be that relating to the history prescribed.

An option will be allowed on the Ontario requirements in this subject.

One examination paper of two hours.

English.

A. *Composition.* As in the Ontario High School Composition (Copp, Clark Co.), with a short essay on a general subject and two or three others based on the works prescribed for reading, as follows:—George Eliot, Silas Marner (The Macmillan Co. of Canada); Shakespeare, The Tempest (The Macmillan Co. of Canada); Browning's Shorter Poems (The Macmillan Co. of Canada).

These books should be read carefully, but the student's attention should not be so fixed upon details that he fails to appreciate the main purpose and beauty of the works.

Frequent practice in composition is essential.

B. *Literature* (for critical study).—Shakespeare, Julius Cæsar; Selections from Tennyson, as in the Laureate Poetry Books, No. 8 (E. Arnold, London; agents, Copp, Clark Co., Toronto); Coleridge, Selected Poems (The Macmillan Co. of Canada).

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* For candidates intending to enter the Faculty of Agriculture or the Department of Music.

Candidates will be expected to have memorized some of the finest passages.

Two examination papers of two hours each, one on Composition and the other on Literature (for critical study).

An alternative paper will be set on the work specified in English for the Junior Matriculation Examination of the Province of Ontario.

Spelling will be tested by the candidates' papers in English. Examiners in other subjects will also take note of mis-spelled words and will report flagrant cases to the Board.

Greek.

Texts:—Philpotts and Jerram, Easy Selections from Xenophon, chaps. 3, 4, 5; Homer, Iliad I, lines 1 to 350.

Grammar.—Knowledge of grammar will be tested by translation and by grammatical questions based on the specified texts.

Translation at Sight from Greek into English.

Two papers of two hours each will be set; one on the prescribed texts and questions thereon, the other on translation at sight, accidence and syntax.

Alternative questions will be set on the work prescribed in Greek for the Junior Matriculation Examination of the Province of Ontario, if this differs from that specified above.

At the September examination other texts equivalent to those specified may be accepted, if application be made to the Registrar at least one month before the date of the examination.

Latin.

Texts.—(A) Cæsar, De Bello Gallico, Books II and III; and (B) *Either* Ovid, Stories from the Metamorphoses (as in Gleason's "A Term of Ovid," (American Book Company), lines 1 to 670, *or* Virgil, Aeneid II (Wainwright, Bell's Illustrated Classics), verses 1 to 505.

Grammar.—Knowledge of grammar will be tested by translation and composition, and by grammatical questions based on the specified texts.

Translation at Sight from Latin into English.

Composition.—Translation into Latin of detached English sentences and easy narrative based on the prescribed texts.

Two papers of two hours each will be set; one on composition and translation at sight, the other on prescribed texts and grammar.

Note.—The "Roman" method of pronouncing Latin is recommended.

An alternative paper will be set on the Latin texts prescribed for the Junior Matriculation Examination of the Province of Ontario, if these differ from those specified above.

At the September examination other texts in Latin equivalent to those specified may be accepted, if application be made to the Registrar at least a month before the day of the examination.

French.

Grammar.—A thorough knowledge of French accidence and of those points of syntax which are of more frequent occurrence in an ordinary easy style.

Translation at Sight into English of a French passage of moderate difficulty.

Translation at Sight into French of detached English sentences and an easy English passage. Material for such translation is selected with a view to testing the candidate's general knowledge of French grammar.

Books recommended:—Fraser and Squair's French Grammar or Bertenshaw's French Grammar (Longmans), and Cameron's Elements of French Prose Composition (Holt & Co.).

A list of French texts suitable for class reading can be obtained by applying to the Registrar.

Two papers will be set, of two hours each, one on grammar, including translation of short English sentences into French, and one on translation of continuous passages from French into English and from English into French.

German.

Grammar.—A thorough knowledge of German accidence and syntax, as in Van der Smissen, or any other German grammar of equally good standing.

Translation at Sight into English of a German passage of moderate difficulty.

Translation into German of detached English sentences and of an easy English passage. Material for such translation is selected with a view to exemplifying the points of grammar included within the above limits.

Texts:—(Translation and grammatical study):—

Glück auf (Ginn & Co.), to be read first; then Fritz auf Ferien (Copp, Clark Co.).

The Ontario Junior Matriculation requirements in German will be accepted in place of the texts specified above.

At the September examination other texts equivalent to those specified may be accepted, if application be made to the Registrar at least one month before the date of the examination.

Two papers will be set, of two hours each, one on grammar, including translation of short English sentences into German, and one on translation of continuous passages from German into English and from English into German.

Elementary Mathematics.

Algebra.—Elementary rules, involution, evolution, fractions, indices, surds, simple and quadratic equations of one or more unknown quantities; as in Hall and Knight's Elementary Algebra, to the end of surds (omitting portions marked with an asterisk), or as in similar text-books.

One examination paper of two hours.

Geometry.—The paper shall contain questions on practical and on theoretical geometry. Every candidate shall be expected to answer questions in both branches of the subject.

The questions on practical geometry shall be set on the constructions contained in the annexed Schedule A, together with easy extensions of them. In cases where the validity of a construction is not obvious, the reasoning by which it is justified may be required. Every candidate shall provide himself with a ruler graduated in inches and tenths of an inch, and in centimetres and millimetres, a set square, a protractor, compasses and a hard pencil. All figures should be drawn accurately. Questions may be set in which use of the set square or the protractor is forbidden.

The questions on theoretical geometry shall consist of theorems contained in the annexed Schedule B, together with questions upon these theorems, easy deductions from them, and arithmetical illustrations. Any proof of a proposition shall be accepted which appears to the examiners to form part of a systematic treatment of the subject; the order in which the theorems are stated in Schedule B is not imposed as the sequence of their treatment.

In the proof of theorems and deductions from them, the use of hypothetical constructions shall be permitted. Proofs which are only applicable to commensurable magnitudes shall be accepted.

SCHEDULE A.

Bisection of angles and of straight lines.
Construction of perpendiculars to straight lines.
Construction of an angle equal to a given angle.
Construction of parallels to a given straight line.
Simple cases of the construction from sufficient data of triangles and quadrilaterals.
Division of straight lines into a given number of equal parts or into parts in any given proportions.
Construction of a triangle equal in area to a given polygon.

Construction of tangents to a circle and of common tangents to two circles.

Simple cases of the construction of circles from sufficient data.

Construction of a fourth proportional to three given straight lines and a mean proportional to two given straight lines.

Construction of regular figures of 3, 4, 6 or 8 sides in or about a given circle.

Construction of a square equal in area to a given polygon.

Schedule B.

If a straight line stands on another straight line, the sum of the two angles so formed is equal to two right angles; and the converse.

If two straight lines intersect, the vertically opposite angles are equal.

When a straight line cuts two other straight lines, if (i) a pair of alternate angles are equal or (ii) a pair of corresponding angles are equal, or (iii) a pair of interior angles on the same side of the cutting line are together equal to two right angles, then the two straight lines are parallel; and the converse.

Straight lines which are parallel to the same straight line are parallel to one another.

The sum of the angles of a triangle is equal to two right angles.

If the sides of a convex polygon are produced in order, the sum of the angles so formed is equal to four right angles.

If two triangles have two sides of the one equal to two sides of the other, each to each, and also the angles contained by those sides equal, the triangles are congruent.

If two triangles have two angles of the one equal to two angles of the other, each to each, and also one side of the one equal to the corresponding side of the other, the triangles are congruent.

If two sides of a triangle are equal, the angles opposite to these sides are equal; and the converse.

If two triangles have the three sides of the one equal to the three sides of the other, each to each, the triangles are congruent.

If two right-angled triangles have their hypotenuses equal, and one side of the one equal to one side of the other, the triangles are congruent.

If two sides of a triangle are unequal, the greater side has the greater angle opposite to it; and the converse.

Of all the straight lines that can be drawn to a given straight line from a given point outside it, the perpendicular is the shortest.

The opposite sides and angles of a parallelogram are equal, each diagonal bisects the parallelogram, and the diagonals bisect one another.

If there are three or more parallel straight lines, and the intercepts made by them on any straight line that cuts them are equal, then the corresponding intercepts on any other straight line that cuts them are also equal.

Parallelograms on the same or equal bases and of the same altitude are equal in area.

Triangles on the same or equal bases and of the same altitude are equal in area.

Equal triangles on the same or equal bases are of the same altitude.

Illustrations and explanations of the geometrical theorems corresponding to the following algebraical identities:

$$\begin{aligned} k\,(a + b + c \ldots) &= ka + kb + kc + \ldots \\ (a + b)^2 &= a^2 + 2ab + a^2 \quad \ldots \\ (a - b)^2 &= a^2 - 2ab + b^2 \quad \ldots \\ (a^2 - b^2) &= (a + b)\,(a - b). \end{aligned}$$

The square on a side of a triangle is greater than, equal to, or less than the sum of the squares on the other two sides, according as the angle contained by those sides is obtuse, right, or acute. The difference in the cases of inequality is twice the rectangle contained by one of the two sides and the projection on it of the other.

The locus of a point which is equidistant from two fixed points is the perpendicular bisector of the straight line joining the two fixed points.

The locus of a point which is equidistant from two intersecting straight lines consists of the pair of straight lines which bisect the angles between the two given lines.

A straight line, drawn from the centre of a circle to bisect a chord which is not a diameter, is at right angles to the chord; conversely, the perpendicular to a chord from the centre bisects the chord.

There is one circle, and one only, which passes through three given points not in a straight line.

In equal circles (or, in the same circle) (i) if two arcs subtend equal angles at the centres, they are equal; (ii) conversely, if two arcs are equal, they subtend equal angles at the centres.

In equal circles (or, in the same circle) (i) if two chords are equal, they cut off equal arcs; (ii) conversely, if two arcs are equal, the chords of the arcs are equal.

Equal chords of a circle are equidistant from the centre; and the converse.

The tangent at any point of a circle and the radius through the point are perpendicular to one another.

If two circles touch, the point of contact lies on the straight line through the centres.

The angle which an arc of a circle subtends at the centre is double that which it subtends at any point on the remaining part of the circumference.

Angles in the same segment of a circle are equal; and, if the line joining two points subtends equal angles at two other points on the same side of it, the four points lie on a circle.

The angle in a semicircle is a right angle; the angle in a segment greater than a semicircle is less than a right angle; and the angle in a segment less than a semicircle is greater than a right angle.

The opposite angles of any quadrilateral inscribed in a circle are supplementary; and the converse.

If a straight line touch a circle, and from the point of contact a chord be drawn, the angles which this chord makes with the tangent are equal to the angles in the alternate segments.

If two chords of a circle intersect either inside or outside the circle the rectangle contained by the parts of the one is equal to the rectangle contained by the parts of the other.

If a straight line is drawn parallel to one side of a triangle, the other two sides are divided proportionally and the converse.

If two triangles are equiangular their corresponding sides are proportional; and the converse.

If two triangles have one angle of the one equal to one angle of the other and the sides about these equal angles proportional, the triangles are similar.

The internal bisector of an angle of a triangle divides the opposite side internally in the ratio of the sides containing the angle, and likewise the external bisector externally.

The ratio of the areas of similar triangles is equal to the ratio of the squares on corresponding sides.

Text-book recommended:—Godfrey and Siddons' Elementary Geometry (Pitt Press, Cambridge), or Hall and Stevens' School Geometry.

An alternate paper will be set on the Ontario Junior Matriculation requirements in this subject.

One examination paper of two hours.

Advanced Mathematics.

Algebra.—The three progressions, ratio, proportion, variation, permutations and combinations, binomial theorem, logarithms, theory of quadratic equations, as in the remainder of Hall and Knight's Elementary Algebra (omitting Chaps. 40 to 44 inclusive), or as in similar text-books.

One examination paper of two hours.

Geometry.

Constructions.

To draw the inscribed, escribed, and circumscribing circles of a triangle.

To construct triangles under given conditions.

To divide a given line externally and internally in medial section.

To construct an isosceles triangle, such that each of the base angles is twice the vertical angle.

To describe a regular pentagon.

To construct a polygon similar to a given polygon, and such that their areas are in a given ratio.

To construct a figure equal in area to a given figure A, and similar to another figure B.

Theorems.

If two sides of one triangle be equal respectively to two sides of another, that with the greater contained angle has the greater base; and conversely.

If a triangle is such that the square on one side is equal to the sum of the squares on the other two sides, the angle contained by these sides is a right angle.

The three medians of a triangle are concurrent.

Perpendiculars from the angles to the opposite sides of a triangle are concurrent.

The complements of parallelograms about the diagonal of any parallelogram are equal.

If the circumference of a circle be divided into n equal arcs:—

(1) The points of division are the vertices of a regular polygon of n sides inscribed in the circle.

(2) If tangents be drawn to the circle at these points, these tangents are the sides of a regular polygon of n sides circumscribed about the circle.

If $OA:OB=OC^2$, OC is a tangent to the circle through A B C.

If two triangles have an angle in each equal, and the sides about two other angles proportional, the remaining angles are equal or supplemental.

The perpendicular from the right angle of a right-angled triangle on the hypotenuse divides the triangle into two triangles which are similar to the original triangle.

The sum of the rectangles contained by the opposite sides of a quadrilateral, about which a circle can be described, is equal to the rectangle contained by its diagonals.

The squares on two sides of a triangle are together equal to twice the square on half the third side and twice the square on the median to that side.

If from the vertical angle of a triangle a straight line be drawn perpendicular to the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the perpendicular and the diameter of the circle described about the triangle.

If the vertical angle of a triangle be bisected by a straight line which also cuts the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the segments of the base together with the square on the straight line which bisects the angle.

The areas of two similar polygons are as the squares on corresponding sides.

In a right angled triangle the rectilineal figure described on the hypotenuse is equal to the sum of the similar and similarly described figures on the other two sides.

If three lines be proportional, the first is to the third as the figure on the first is to a similar figure on the second.

If the straight lines joining a point to the vertices of a given polygon are divided (all externally or all internally) in the same ratio, the two points of division are the vertices of a similar polygon.

Two similar polygons may be so placed that the lines adjoining corresponding points are concurrent.

Triangles of equal altitude are as their bases.

In equal circles, angles, whether at the centres or circumferences, are proportional to the arcs on which they stand.

If P is any point on the circumscribing circle of a triangle, ABC, and PL, PM, PN are perpendicular to BC, CA, AB, respectively, LNM is a straight line.

A point P moves so that the ratio of its distances from two fixed points, Q and R, is constant; prove that the locus of P is a circle.

Areas.

Area of a circle.
Area of a sector of a circle.
Area of a segment of a circle.

Use of Squared Paper.

Marking points.
Finding areas of rectilinear and curvilinear figures.
Examples of plotting loci; in particular, the ellipse, hyperbola, and parabola.
Examples of Loci and Envelopes.

Deductions and Applications.

Deductions from and simple applications of the constructions and theorems given above.

Text-book:—Godfrey and Siddons' Elementary Geometry (Pitt Press, Cambridge), or Hall and Stevens' School Geometry.

An option will be set in Geometry on the work prescribed for Honour Matriculation in the Province of Ontario.

Trigonometry.—Measurement of angles, trigonometrical ratios or functions of one angle, of two angles, and of a multiple angle; as in Lock's Elementary Trigonometry, Chaps. I to XII; Hall and Knight's Trigonometry, Chaps. I to XII, inclusive, omitting Chap. V; or as in similar text-books.

For Trigonometry and Advanced Geometry, one examination paper of three hours.

Botany.

Text-books recommended:—Bergen and Davis, Principles of Botany, or Atkinson, Elementary Botany.

One examination paper of two hours.

Chemistry.

(1)*For admission to the Faculties of Arts, Law and Applied Science.*

Elementary inorganic chemistry, comprising the preparation and properties of the chief non-metallic elements and their more important compounds, the laws of chemical action, combining weight, etc. Text-book:—"Elementary Chemistry for High Schools," by Nevil Norton Evans (Educational Book Company, Limited, Toronto), Chaps. I to XVI inclusive.

One examination paper of two hours.

(2) *For admission to the Faculty of Medicine.*

(Not required for the Session 1918-19. Candidates will be admitted on satisfying the requirements for entrance to Arts, under (1) above.)

It is recommended that the course extend over one school year and consist of a minimum of two hours' class-room work and one period of two hours' practical work per week; or the equivalent amount of instruction extended over more than one school year.

Class Work:—Physical and chemical changes, elements, compounds, mixtures and solutions; fundamental chemical laws and principles, as definite proportions, multiple proportions, constancy of mass equivalence, catalysis, and the atomic hypothesis; Avogadro's hypothesis and its applications; electrolysis, with brief reference to ionization in solutions; properties of acids, bases, and salts; types of chemical reactions; methods of oxidation, reduction and replacement; chemical nomenclature; use of formulæ and equations.

Occurrence, preparation, physical and chemical properties of the following elements; hydrogen, oxygen, nitrogen, sulphur, sodium, chlorine, bromine, iodine, carbon, calcium, phosphorus; general properties of the metals as a class; the chemistry and uses in the industries and in everyday life of the following compounds: water, hydrogen chloride, hydrogen suplhide, sulphur dioxide, sulphuric acid, ammonia, nitric acid, carbon monoxide, carbon dioxide, silicon dioxide, sodium hydroxide, sodium carbonate, calcium carbonate, calcium sulphate, calcium oxide.

Practical Work:—Note-books are to be kept by pupils in which the experiments are to be recorded and reactions described. These should be certified by the teacher as representing the actual laboratory work performed. The work should include: the preparation of most of the gases described in the class-room work, and a study of their chief characteristics and properties; neutralization properties of acids, bases and salts; formation of oxides of metals and several salts, such as sulphates, nitrates, chlorides, etc.; crystallization, filtration, distillation and sublimation; the preparation of (say) nitric acid, bromine and iodine; a few samples of precipitation tests for metals in salts. All experiments to be explained and wherever possible represented by equations in the note-books.

Text-book:—Elementary Chemistry for High Schools, by Nevil Norton Evans (Educational Book Co., Limited, Toronto), Chaps. I to XXIII, inclusive.

One examination paper of two hours.

Physics.

(1)*For admission to the Faculties of Arts, Law and Applied Science.*

Properties of matter; elementary mechanics of solids and fluids, including the laws of motion, simple machines, work, energy; fluid pressure and specific gravity; thermometry, the effects and modes of transmission of heat.

Text-books recommended:—Gage's Introduction to Physical Science, 1902 edition (Ginn & Co.), Chaps. I to IV, inclusive; or Household Physics, by C. J. Lynde (Macmillan Co. of Canada).

One examination paper of two hours.

(2) *For admission to the Faculty of Medicine.*

(Not required for the Session 1918-19. Candidates will be admitted on satisfying the requirements for entrance to Arts as under (1) above.)

An experimental course defined as follows, and including simple problems:

Electricity:—Magnetism; laws of magnetic attraction and repulsion; magnetic lines of force; phenomena of induction; inclination and declination of the compass; production and detection of electricity; electrical conductors and insulators; electroscopes and their construction; electrical conduction through air; radioactivity illustrated by means of uranium and thorium salts; electrical conduction in liquids; electrolysis; electroplating and electrotyping, voltmeters, storage and voltaic cells; simple notions of potential; Ohm's Law; electrical units; galvanometers and voltmeters; laws of resistance; divided circuits, experimental determination of current strength, resistance, and electromotive force; current induction and its general laws; the transformer, the induction coil, dynamo, telephone, motor, ether waves, Roentgen rays, and wireless telegraphy.

Heat:—Nature and sources of heat; relation between volume and the temperature of a gas (Charles' Law); absolute temperature; change of state; latent heat; specific heat; transmission of heat.

Sound:—Vibrations: transversal vibrations, illustrated with pendulums, rods, strings, membranes, plates; longitudinal vibrations illustrated with rods, strings and columns of air; production, propagation, and detection of sound waves; velocity of sound, pitch; standard forks (acoustical C=512, musical A=870); intervals; harmonic scale; diatonic scale; equally tempered scale; vibration of air in organ pipes; nodes and loops in vibrating air columns and in vibrating strings; wave lengths and velocity relations; laws of vibration of strings; interference phenomena; beats; resonance, reflection and absorption of sound.

Light.—The ether, the wave theory of light, rectilinear propagation, image through a pin-hole, beam, pencil; photometry, shadow and grease spot photometers; reflection and scattering of light; laws of reflection; images in plane mirrors, concave and convex mirrors; drawing images; refraction, laws and index of refraction; total reflection; path through a prism; lenses; drawing image produced by a lens by use of critical rays; simple microscope; dispersion and colour; spectrum; recomposition of light; camera.

One examination paper of two hours.

SEPTEMBER EXAMINATION.

The September matriculation examination in 1918 will commence on Wednesday the 18th.

Special arrangements may be made for the examination of candidates who are prevented by severe illness or domestic affliction from presenting themselves on the dates fixed.

SENIOR MATRICULATION.

(1) *For admission to Second Year Arts—B.A. Course.*

SUBJECTS OF EXAMINATION.

1. **Latin** or **Greek.**
2. **English.**
3. **History.**
4. **Latin** *or* **Greek** (the one not already taken) *or* **French** *or* **German.**
5. **Mathematics (Algebra, Geometry** and **Trigonometry).**
6. **Physics.**

Candidates intending to take the Double Course in Arts and Medicine must take German instead of Physics.

(2) *For admission to Second Year Arts—B.Sc. Course.*

1. **Chemistry.**
2. **English.**
3. **French.**
4. **German.**
5. **Mathematics.**
6. **Physics.**

This examination is held under the same regulations as apply in the case of students of the first year. It will be held only in September, commencing on the 18th.

FEES.

For the first examination	$15.00
For a subsequent examination, per subject.....	2.00

REQUIREMENTS IN EACH SUBJECT.

Chemistry.

Text-books:— Alex. Smith, General Chemistry or Macpherson and Henderson, General Chemistry as for second year.

English.

Composition.—The examination will be designed mainly to test the candidate's ability to write English. He will be expected to have acquired a fairly clear and accurate style, to be able to arrange material in an effective fashion, and to show discrimination in the choice of words. In preparation for the examination, it is suggested that students be required to write mainly on simple, expository subjects that are within the range of their actual experience.

Carpenter's Rhetoric and English Composition (Macmillan) is recommended as a suitable text-book.

Literature.—The examination will be based on the following texts:—Chaucer's Prologue to the Canterbury Tales; Spenser's Faerie Queene, Book I, Cantos 1 and 2; Shakespeare's Macbeth and As You Like It; Milton's Minor Poems (L'Allegro, Il Penseroso, Lycidas and Comus); and Bunyan's Pilgrim's Progress, Part I.

Candidates will also be expected to read Long's English Literature (Ginn & Co.), Chapters I-VII, inclusive, with special emphasis on the portions most closely connected with the foregoing list of books.

French.

(1) *For B.A. Course.*

Vreeland & Koren, French Syntax and Composition (Holt); Super, Histoire de France (Holt); About, Roi des Montagnes (Heath); Erckmann-Chatrian, Waterloo (Heath); Dumas, La Question d'Argent (Allyn & Bacon); Mérimée, Quatre Contes (Holt); Bruce, Récit et Contes de la Guerre de 1870 (Holt).

(2) *For B.Sc. Course.*

The requirements for Junior Matriculation as on page 53.

German.

(1) *For B.A. Course.*

Van der Smissen und Fraser, High School German Grammar (Copp, Clark Co.); Heyse, Die Blinden (Holt); Moser, Ultimo

(Holt); Stern, Geschichten von deutschen Städten (American Book Co.).

(2) *For B.Sc. Course.*

The requirements for Junior Matriculation (page 53), or the course in Beginners' German (page 135).

Greek.

Homer, Iliad, XVIII (Platt, Blackie's Illustrated Series); Euripides, Hecuba (Upcott, Bell's Illustrated Classics); Lysias, pages 108 to 140 in Shuckburgh's Lysias, Orationes (Macmillan).

N.B.—Although the above editions are suggested, others may be used.

The examination will include a paper on grammar, composition and sight translation.

One of the following books is recommended for grammar: First Greek Grammar, Rutherford (Macmillan); Goodwin's Greek Grammar (Ginn & Co.).

History.

Gilbert Murray, Greece (Home Univ. Library); Wheeler, Alexander The Great (Heroes of the Nations); Herodotus, Books VII and VIII (Everyman's Translation); Fowler, Rome (Home Univ. Library); Fowler, Social Life at Rome in the Age of Cicero (Macmillan); Botsford, History of Rome (Macmillan); Livy, Book XXI (Everyman's Translation); Plutarch, Lives of Pericles, Caius Gracchus, Cato the Younger and Julius Cæsar.

Latin.

A.—Virgil, Aeneid, VIII (Tetlow, Ginn). B.—Either (1) Livy, Book VI (Laming, Blackie's Illustrated Latin Series), or (2) Suetonius, Augustus (Peck, Henry Holt and Co.).

The examination will include a paper on grammar, composition and sight translation.

The grammar recommended is:—New Latin Grammar by Sonnenschein (Clarendon Press. N.B.—Note the exact title.)

Mathematics.

Plane and Solid Geometry.—The equivalent of Books IV, VI and XI of Euclid, with supplementary matter from Hall and Stevens' Euclid.

Algebra.—Hall and Knight's Elementary Algebra (omitting chapters 40-42 inclusive), or the same subject matter in similar textbooks.

Trigonometry.—Hall and Knight's Elementary Trigonometry to page 210 and chapter 19; nature and use of logarithms (Bottomley's four-figure tables).

Physics.

A general knowledge of the more important principles of elementary physics will be required.

Text-book:—College Physics, by Reed and Guthe (Macmillan), omitting articles with asterisks and the following chapters:—6, 8, 10, 23, 27, 39, 46, 47, 48, 56, 57, 58, 59, 60, 62, 64.

ADMISSION TO ADVANCED STANDING.

A student of another university applying for exemption from any subject or subjects which he has already studied is required to submit with his application a Calendar of the University in which he had previously studied, together with a complete statement of the course he has followed and a certificate of the standing gained therein.

The Faculty concerned, if otherwise satisfied, will decide what examination, if any, or what other conditions may be necessary before admitting the candidate.

PHYSICAL EXAMINATION AND TRAINING.

In order to promote as far as possible the physical welfare of the student body, every student, on entering the University, will be required to pass a physical examination to be conducted by, or under the direction of, the Medical Director of Physical Education or by a recognized representative.

By such an examination physical defects and weaknesses, amenable to treatment, may be discovered. The student would then be expected to apply to his physician for such remedial measures as his case may require. Those who are examined will also be advised as to the forms of exercise or athletic activities which would likely be beneficial or injurious.

Students who do not present themselves for this examination (or otherwise satisfy the Medical Director), before November 1st, will not be allowed to attend the University.

A further examination will be held after Christmas, when students of the first year will state what they have done, and propose to do, in the way of exercise.

All students entering the University for the first time are required to present a certificate, or other satisfactory evidence, of successful vaccination, failing which, they shall at once be vaccinated in a manner satisfactory to the medical examiner.

For the duration of the present war and while the University is without a gymnasium, military training shall be compulsory, during the first three years of his course, for every British male student of the University who is declared fit by the medical officer. In order to obtain his year's standing every student required to take military drill must qualify by attending four-fifths of all regular parades and drills and by being passed as efficient in his military work.

The Medical and Physical Directors will lay before every male student entering the first year, who is not a British subject, a schedule of the sports and physical activities which are available and require them to state to which form of exercise they intend to apply themselves, and every such student will be expected to spend a reasonable amount of his time on physical exercise, unless he has satisfactory reasons for exemption.

For regulations concerning students of the Royal Victoria College, see page 317.

AGE OF ADMISSION.

Except under special circumstances, no student under the age of sixteen is admitted to the first year courses in Arts, Applied Science or Medicine, or under the age of seventeen to the second year, and no student under the age of seventeen is admitted to the course in Law.

OPENING AND CLOSING DATES OF SESSION, 1918-1919.

The Session 1918-1919 will open in all Faculties on Tuesday, October 1st, 1918, and on the afternoon of that day (at 5 p.m.) the Principal will deliver the usual opening address in the Assembly Hall of the Royal Victoria College. It will end in the Faculties of Arts, Law and Applied Science on Monday, May 12, 1919.

For information regarding registration, see page 68.

CLASSES OF STUDENTS.

There are four classes of students in the University:

(1) Graduates—students who have previously obtained an ordinary degree at McGill, or elsewhere, and who are now pursuing courses for the Master's degree (in Arts, Applied Science or Law), or for the degree of Ph.D.

(2) Undergraduates—students who have passed the matriculation examination and, in the case of second, third and fourth year students, all the examinations of their course in the years below that in which they are registered.

(3) Conditioned undergraduates—those with defective entrance qualifications or who have failed in one or more of the subjects of their course in the year below that in which they are registered.

(4) Partial students—comprising all those who, not belonging to one of the above classes, are taking a partial course of study in the University. In order to obtain admission, such students must pass the matriculation examination in the subject, or subjects, which they wish to take, or, failing this, must be able to satisfy the Head of the Department concerned that they are qualified to proceed with the course.

REGISTRATION AND ATTENDANCE.

1. REGISTRATION.

BETWEEN SEPTEMBER 23RD AND SEPTEMBER 28TH, BOTH DATES INCLUSIVE, STUDENTS IN LAW AND MEDICINE, AND THOSE WITHOUT CONDITIONS IN APPLIED SCIENCE, MAY REGISTER FOR THE SESSION 1918-1919 AT THE OFFICE OF THE UNIVERSITY REGISTRAR AND STUDENTS IN ARTS AT THE DEAN'S OFFICE. SATURDAY, SEPTEMBER 28TH, WILL BE SPECIAL REGISTRATION DAY FOR NEW STUDENTS. ON MONDAY, SEPTEMBER 30TH, THOSE WHO HAD BEEN ENROLLED IN ANY PREVIOUS SESSION WILL REGISTER AS FOLLOWS, IF THEY HAVE NOT ALREADY DONE SO:—ARTS STUDENTS IN THE DEAN'S OFFICE; APPLIED SCIENCE STUDENTS IN THE ENGINEERING BUILDING, AND MEDICAL STUDENTS IN THE OFFICE OF THE UNIVERSITY REGISTRAR. LECTURES WILL COMMENCE ON TUESDAY, OCTOBER IST. THE COMPLETE REGULATIONS REGARDING REGISTRATION ARE AS UNDER:

1. Candidates entering on a course of study in any Faculty, whether as undergraduates, conditioned undergraduates, partial students, or graduate students, are required to attend at the office of the University Registrar, or such other place as he may designate, some time during the week preceding the opening day of the session, in order to furnish the information necessary for the University records, to register for the particular classes which they wish to attend, and to sign the following declaration in the matricula or register:—

"I hereby accept and submit myself to the statutes, rules, regulations and ordinances of McGill University, and of the Faculty or Faculties in which I am registered, and to any amendments thereto which may be made while I am a student of the University, and I promise to observe the same."

2. On the day immediately before the opening of the session students who had been previously enrolled shall register for particular subjects as follows:—Arts students in the Dean's Office; Medical and Law students at the office of the University Registrar, and Applied Science students in the Engineering Building. With the exception of students in Applied Science, who have conditions, they may also register during the five preceding days at the Registrar's Office.

3. Students who for any reason have failed to register at the times specified above will be permitted to do so at the Registrar's

Office within a limited time thereafter. In the Faculty of Applied Science, students previously enrolled who do not register on the regular registration day, Monday, September 30th, will be allowed to do so thereafter only when they have paid a fee of $5.00 to the Bursar for late registration.

4. The Registrar is empowered to register all students whose records show that they are entitled to attend the classes applied for. All doubtful cases shall be dealt with by committees as follows: in the case of candidates registering for the first time, by a committee of the Matriculation Board; in the case of all others, by a committee of the Faculty concerned.

5. The names of those who have registered for separate classes shall be sent by the Registrar to the Heads of Departments on registration day and subsequently, as new names are received, and only those for whom cards have been received by an instructor shall be given credit for attendance.

6. Students desiring to make a change in their choice of studies must make application to the Registrar to do so on a regular form. This application must be approved by the Dean of the Faculty in which he is enrolled, whereupon due notice will be sent by the Registrar to all parties concerned. No change in registration will be allowed, except under special circumstances, after the fifteenth day of the session.

7. Persons who wish to pursue courses in the University without a view to qualifying for a degree shall be classified as partial students and shall not be admitted to any course until they have obtained the permission of the Head of the department concerned. Their application must then be approved by the Dean of the Faculty or the committee appointed for this purpose.

8. In the Faculty of Arts, where there is a choice of courses, students in attendance shall be required to choose their electives for the next year before the close of the preceding session, or (in cases where this cannot be done) not later than one week before the opening of the session.

2. ATTENDANCE.

1. Students are required to attend at least seven-eighths of the total number of lectures in any one course. Those whose unexcused absences exceed one-eighth of the total number of lectures in a course shall not be permitted to come up for the regular examination in that course; and, in the Faculty of Applied Science, those whose unexcused absences have exceeded one-fourth of the total number of lectures in any course must repeat the work in that course.

Excuses on the ground of illness or domestic affliction shall be dealt with only by the Deans of the respective Faculties.

2. A record shall be kept by each professor or lecturer, in which the presence or absence of students shall be carefully noted. This record shall be submitted to the Faculty when required.*

3. Credit for attendance on any lecture or class may be refused on the grounds of lateness, inattention, neglect of study, or disorderly conduct in the class room or laboratory. In the case last mentioned the student may, at the discretion of the Professor, be required to leave the room. Persistence in any of the above offences against discipline shall, after admonition by the Professor, be reported to the Dean of the Faculty concerned. The Dean may, at his discretion, reprimand the student, or refer the matter to the Faculty at its next meeting, and may in the interval suspend from classes.

4. The following special regulation with regard to marking the attendance of students has been adopted by the Faculties of Arts and Applied Science:—

Lectures will commence at five minutes after the hour, on the conclusion of the roll call. After the commencement of a lecture students are not allowed to enter, except with the permission of the Professor. If permitted to enter, they will, on reporting themselves at the close of the lecture, be marked "late." Two lates will count as one absence. Lectures end at five minutes before the hour.

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* Physical education for women is included under this regulation.

STUDENTS' EXPENSES.

1. BOARD AND RESIDENCE.

No college residences have as yet been erected for men students, but dormitory accommodation for about 60 is provided in Strathcona Hall, the home of the McGill Y.M.C.A. Full particulars concerning terms of residence, etc., may be obtained from the Secretary of the Association, 348 Sherbrooke street west, Montreal, who will also make arrangements to have students who are strangers to the City met on arrival and helped to secure lodgings, if due notice is sent of the station and time at which they will arrive.

A list of suitable boarding and lodging houses in the city is prepared about a fortnight before the opening of the session each year, and may be obtained on application to the Secretary of the McGill Y.M.C.A., Strathcona Hall.

Women students may board and reside either in private houses or in the Royal Victoria College, which provides, in addition to separate lecture rooms, residential accommodation for the women students of the University. The expense of board and residence for the session in the Royal Victoria College is $290. Students who remain for the summer classes pay a fee of $50, which includes board, residence and instruction. Further particulars will be furnished by the Warden.

Board and lodging can be obtained in private houses in the vicinity of the University buildings at a cost of from $40 and upwards per month; or, separately, board at $25 to $35 per month, rooms from $10 to $18 per month.

Board is furnished in the McGill Union at low rates. The dining room, which is a special feature of the Union, will accommodate over 120 students at a time. There is also a lunch counter where meals are served *à la carte*.

2. APPROXIMATE ESTIMATE OF COST OF COURSE.

(The session extends from October 1st to May 1st.)

Faculty of Arts (men).*

	Minimum	Moderate
Tuition Fees	$ 58	$ 58
Fee for Athletcs, Union, etc.	10	10
Board and Lodging	280	350
Books and Apparatus	17	22
	$365	$440

Faculty of Applied Science.

(The session extends from October 1st to May 1st.)

	Minimum	Moderate
Tuition Fees	$197†	$197†
Fee for Athletcs, Union, etc.	10	10
Board and Lodging	280	350
Books and Instruments	38	48
	$525	$605

Students attending summer courses, required in certain years, for an additional period of one month, will have to spend from $40 to $50 extra in those particular years.

Faculty of Medicine.

(The session extends from October 1st to May 20th.)

	Minimum	Moderate
Tuition Fees	$147	$147
Fee for Athletcs, Union, etc	10	10
Board and Lodging	310	380
Books, Instruments, etc.	53	63
	$520	$600

* For estimate of expenses for women students see page 316, and the Announcement of the Royal Victoria College.

† In the case of students in Architecture, this fee is only $147.00, but the course extends over five years.

Undergraduates in Arts residing in affiliated theological colleges, with a view to a course in theology, are able to obtain board and lodging for less than the minimum shown above, and in all Faculties the expense under the head of "Books and Instruments" can be reduced by purchasing these at second-hand.

It will be noticed that in the above estimate no account is taken of personal expenses, such as cost of clothes, laundry, etc., nor yet of the caution money deposit which is made by each student at the commencement of the session. This amounts to $5.00 in the Faculties of Arts and Law and $10.00 in the Faculties of Medicine and Applied Science. It might be well also to reckon on at least $20.00 or $25.00 per annum for subscriptions of various kinds.

LOAN FUNDS.

1. A fund has been established by the Applied Science Class of 1899, to be known as "The Class of 1899 Fund," for the purpose of aiding, each year, one or more students who, upon the completion of their second year work, require assistance to enable them to finish their course of study. The loans from this fund made to students will be repayable after graduation. Applications should be made through the Dean.

2. The George Henry Frost Fund was created by the gentleman whose name it bears for the purpose of aiding students who, when commencing the work of the second or subsequent years, in the Faculty of Applied Science, require assistance to enable them to complete their course. Loans from this fund will bear interest at three per cent. and will be repayable within three years after graduation. In making loans from this fund the academic standing of the students will be taken into account.

SCHOLARSHIPS, FELLOWSHIPS, MEDALS AND PRIZES.

1. SCHOLARSHIPS, EXHIBITIONS AND PRIZES—GENERAL.

1. THE RHODES SCHOLARSHIP.—This scholarship is of the annual value of £300 sterling and is tenable at the University of Oxford for three years. The scholar must be a British subject, must be over 19 and under 25 years of age, and must have reached at least the end of his sophomore or second year in the University.

Rhodes Scholarships have been awarded as follows:—1904, Herbert J. Rose, B.A., and John G. Archibald, B.A.; 1905, Talbot M. Papineau, B.A.; 1906, Alexander R. McLeod, B.A.; 1908, Frank E. Hawkins, B.A.; 1911, Walter J. Pearse; 1913, W. E. Gladstone Murray, B.A.; 1915, Percy E. Corbett, M.A.

2. SCIENCE SCHOLARSHIPS GRANTED BY HER MAJESTY'S COMMISSIONERS FOR THE EXHIBITION OF 1851.—These scholarships, of the value of £150 sterling a year, are tenable for two, or, in rare instances, three years. They are limited, according to the Report of the Commission, "to those branches of science, such as physics, mechanics and chemistry, the extension of which is specially important for our national industries." Their object is not to facilitate ordinary collegiate studies, but "to enable students to continue the prosecution of science with the view of aiding in its advance or in its applicaton to the industries of the country."

It is open to students of not less than three years' standing who have shown evidence of capacity for original research, and is tenable at any university or other institution approved by the Commission.

A nomination to one of these Scholarships may be granted to McGill University in 1919, in which event applications should be sent to the Registrar on or before March 1st.

This Scholarship has been awarded as follows:—

Evans, P. N., 1891; Macphail, J. A., 1893; King, R. O., 1895; Gill, J. L. W., 1897; McLean, W. B., 1899; McClung, R. K., 1901; Cooke, H. Lester, 1903; Johnson, F. M. G., 1905; Simpson, J. C., 1907; Boyle, R. W., 1909; Shaw, A. Norman, 1911; Meldrum, W. Buell, 1912; Maass, Otto, 1913; Warneford, Frank H. S., 1915.

3. THE DR. T. STERRY HUNT RESEARCH SCHOLARSHIP IN CHEMISTRY.—It is proposed to offer this scholarship each year to graduate students in the Faculties of Arts and Applied Science.

4. THE P. S. ROSS EXHIBITION OF $100.00, founded by Mr. P. D. Ross, B.A.Sc., in memory of his late father, Mr. P. S. Ross, and given through the Ottawa Valley Graduates' Society, will be awarded annually to the candidate from the Ottawa Valley for entrance to any Faculty, who obtains the highest percentage at the June matriculation examination, and attends the University during the ensuing session.

5. THE OTTAWA VALLEY GRADUATES' SOCIETY EXHIBITION, value $50. This exhibition will be awarded annually to the candidate from the Ottawa Valley for entrance to any Faculty who obtains the second highest percentage at the June matriculation examination and attends the University during the ensuing session.

6. THE CHESTER MACNAGHTEN PRIZE of the value of $25.00 in books, established by Russell E. Macnaghten, Esq., M.A., in memory of his late uncle, will be awarded annually, through the University Literary and Debating Society, for reading in English.

II. SCHOLARSHIPS AND EXHIBITIONS IN ARTS.*

GENERAL REGULATIONS.

1. No student can hold more than one exhibition or scholarship at the same time.

2. Exhibitions and scholarships will not necessarily be awarded to the candidates who have obtained the highest marks. An adequate standard of merit will be required.

3. If in any college year there be not a sufficient number of candidates showing adequate merit, any one or more of the exhibitions or scholarships offered for competition may be given to more deserving candidates in another year.

4. A successful candidate must, in order to retain his scholarship or exhibition, proceed regularly with his college course to the satisfaction of the Faculty.

5. The annual income of the scholarships or exhibitions will be paid in four instalments, viz.:—In October, December, February and April, about the 20th of each month.

SCHOLARSHIPS AND EXHIBITIONS AVAILABLE IN ARTS.

The Jane Redpath Exhibition, founded by the late Mrs. Redpath, of Terrace Bank, Montreal:—value about $90; open to both men and women.

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* An exhibition is tenable for one year; a scholarship for two.

The Charles Alexander Scholarship (for men students), founded by the late Charles Alexander, Esq., Montreal, for the encouragement of the study of Classics and other subjects:—value, $90.

The Major H. Mills Scholarship, founded by bequest of the late Major Hiram Mills—value, $100.

The Barbara Scott Scholarship, founded by the late Miss Barbara Scott, Montreal, for the encouragement of the study of the Classical languages and literature:—value, $100 to $120.

Four Mackenzie Exhibitions for Economics and Political Science, founded in memory of the late Hon. Alexander Mackenzie:—value, $50 to $100. (For particulars, see pages 77 and 78.)

Two Howard Murray Exhibitions for History, maintained by Howard Murray, Esq., for a period of five years; value, $100. (For particulars, see page 78.)

The Sir William Dawson Exhibition, given by the New York Graduates' Society:—value, $60.

The Hannah Willard Lyman Exhibition:—value, $50.

The Dr. Barclay Exhibition, to be awarded in the Classical Department:—value, $50.

The Houston Exhibition, available for students studying for the Presbyterian Ministry:—value, $50.

FIRST YEAR SCHOLARSHIPS AND EXHIBITIONS IN ARTS.

I. Exhibition Granted by the Graduates' Society of the District of Bedford.

This exhibition, of the value of $100, will be awarded annually to a "matriculated student in Arts whose parents reside in the District of Bedford, and whose candidature has been approved by a committee of the Society."

II. Narcissa Farrand (Mrs. N. Pettes) Scholarship.

This scholarship, of the value of $300 ($150 for two years), founded by Mr. and Mrs. H. V. Truell, of Sweet Acre, Knowlton, Que., and endowed by them with the sum of $7,000 out of the Narcissa Farrand Fund, will be awarded annually to the candidate from the Eastern Townships who obtains the highest marks at the Arts matriculation examination in June, and who has had his domicile in the Eastern Townships for five consecutive years immediately preceding the examination. Intending competitors must apply to the Registrar before July 1st each year.

III. The Trafalgar Scholarship.

This scholarship was founded in 1913 by certain friends and former pupils of Miss Grace Fairley, to signalize her long and faithful services to education in Montreal, and particularly as head of the Trafalgar Institute. It is of the value of about $100, is tenable for one year only, and will be awarded annually to the student of Trafalgar Institute who obtains the highest marks in the June matriculation examination and matriculates as an undergraduate in the Faculty of Arts.

IV. University Entrance Exhibitions.

For financial reasons, the value of these exhibitions for 1918 and 1919 has been reduced to ten per cent. of the amount hitherto given, and they will be awarded in the form of book prizes. Candidates must apply before July 1st.

V. The Hon. Robert Jones Scholarship.

THE HON. ROBERT JONES' SCHOLARSHIP, having a value of One Hundred and Twenty-five Dollars ($125.00) per annum, "is granted from time to time to some poor student for the full term of study in the Faculty of Arts."

Application for this scholarship should be made through the Dean of the Faculty of Arts. In awarding the scholarship the standing of the student in the matriculation examination will be considered, and the scholarship will not be continued if the standing of the student at any time during his course proves to be unsatisfactory.

SECOND YEAR EXHIBITIONS IN ARTS.

Only two of these exhibitions will be awarded in 1918, value $60 each. Particulars can be obtained at the Registrar's Office.

Applications for this examination must be made before July 1st.

THIRD YEAR SCHOLARSHIPS AND EXHIBITIONS IN ARTS.

Four scholarships of the value of $75 each per year are offered for competition in 1918, and three exhibitions of the value of $40 each. Particulars regarding these can also be obtained at the Registrar's Office.

Applications for this examination must be received by the Registrar before July 1st.

The following special exhibitions are also available in the third and fourth years:—

Mackenzie Exhibitions.

Four exhibitions, known as the Mackenzie Exhibitions, are awarded annually in the Department of Economics and Political

Science. Two of these, of the value respectively of $100 and $50, tenable for one year, are awarded on the result of a special examination (see below), held in September, and open to students who have completed the work of the second year. The tenure of the exhibitions is conditional upon the holders pursuing their studies in the honour work in economics and political science of the third year. The other two exhibitions, of the value respectively of $100 and $50, are awarded on the results of the honour examination of the third year in econocics and political science. The exhibitions will not be awarded except on satisfactory evidence of merit; their tenure is conditional upon the holders pursuing their studies in the honour work in economics and political science of the fourth year.

A fourth year Mackenzie exhibition may be held by a student who holds another; a third year exhibition cannot.

Murray Exhibitions.

Two exhibitions of the value of $100 each, tenable for one year, will be awarded annually in the Department of History. These exhibitions are maintained for a period of five years, from 1915, by Howard Murray, Esq. One of them will be awarded on the result of a special examination open to students who have completed the work of the second year. (For details, see below.) Its tenure is conditional upon the holder taking the honour course in history in the third year. The other exhibition will be awarded on the result of the honour examination of the third year. Its tenure is conditional upon the holder taking the honour course of the fourth year. Neither exhibition will be awarded except upon satisfactory evidence of merit.

Requirements in Each Subject.

Economics. (For Third Year Exhibition.)

John Stuart Mill, Principles of Political Economy, Book I, Book II (Chapters XI, XIV, XV, XVI), Book III and Book V (Chaps. I, II, III, IV, V, VI, X, XI); F. Walker, Political Economy, Advanced Course, Parts I-V (inclusive); J. K. Ingram, History of Political Economy (edition 1893), pp. 1-42 (inclusive), 55-63 (inclusive), 87-104 (inclusive), 196-206 (inclusive), and 231-234 (inclusive); L. L. Price, A Short History of English Commerce and Industry; Smart, W., Theory of Value.

History.

Gibbon's Decline and Fall of the Roman Empire, Chaps. I, II, III, XIII, XIV, XL; Bryce's Holy Roman Empire; The Mediæval Empire, Vol. I, Editor Herbert Fisher (Macmillan).

GRADUATE SCHOLARSHIP IN ARTS.

The Allen Oliver Scholarship (in Economics and Political Science).

This scholarship has been established by Mrs. Frank Oliver, of Edmonton, Alta., in "proud and loving memory of her son, the late Allen Oliver, B.A.,* M.C., Lieutenant 26th Battery, C.F.A., who was killed in action at the Somme on November 18th, 1916." The scholarship will be awarded annually to the student who stands highest in First Class Honours in the Department of Economics and Political Science at the final B.A. examination, and the holder is required to pursue his studies in Economics and Political Science in some university outside of Canada.

The first award will be made in 1921 (class entering in 1917).

III. MEDALS IN ARTS.

Gold Medals will be awarded in the B.A. Honour examinations to students who take the highest honours of the first rank in the subjects stated below, and who shall have passed creditably the ordinary examinations for the degree of B.A., provided they have been recommended therefor to the Corporation by the Faculty, on the report of the examiners:—

The Henry Chapman Gold Medal, for Classical Languages and Literature.

The Prince of Wales Gold Medal, for Mental and Moral Philosophy.

The Anne Molson Gold Medal, for Mathematics and Natural Philosophy.

The Shakespeare Gold Medal, for English Language and Literature.

The Logan Gold Medal, for Geology, Mineralogy and Palæontology.

The Major Hiram Mills Gold Medal, for Biology.

The Governor-General's Gold Medal, for Modern Languages and Literature.

The Allen Oliver Gold Medal, for Economics and Political Science, (founded by Mrs. Frank Oliver, in memory of her late son, Allen Oliver, B.A., M.C., Lieutenant, 26th Battery, C.F.A., who was killed in action at the Somme, on November 18th, 1916).

In addition to the above, certain medals are offered annually by the Alliance Française, at the discretion of the Department of Modern Languages.

If there be no candidate for any medal, or if none of the candidates fulfill the required conditions, the medal will be withheld, and the proceeds of its endowment for the year may be devoted to prizes in the subject for which it was intended.

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* Lieut. Oliver was an Honour graduate of 1915 in the Department of Economics and Political Science.

IV. PRIZES IN ARTS.

1. **The Neil Stewart Prize.**—An annual prize of $15 is open to all undergraduates and graduates of this University, and also to graduates of any other university, who are students of theology in some college affiliated to this University. It will be awarded on the result of the sessional examination in Hebrew of the second year.

The prize, founded by the late Rev. C. C. Stewart, M.A., and terminated by his death, was re-established by the liberality of the late Neil Stewart, Esq., of Vankleek Hill.

2. **Early English Text Society's Prize.**—This prize, the annual gift of the Early English Text Society, wil be awarded for proficiency in the subjects of the language group in the English honour curriculum of the third and fourth years.

3. **New Shakespeare Society's Prize.**—This prize, the annual gift of the New Shakespeare Society, open to graduates and undergraduates, will be awarded for a critical knowledge of the following plays of Shakespeare:—Hamlet, Macbeth, Othello, King Lear.

4. **Charles G. Coster Memorial Prize.**—This prize, of the value of $25.00, and intended as a tribute to the memory of the late Rev. Chas. G. Coster, M.A., Ph.D., Principal of the Grammar School, St. John, N.B., is offered for competition, by Mr. Colin H. Livingstone, B.A., to undergraduates (men and women) from the Maritime Provinces (Nova Scotia, New Brunswick and Prince Edward Island). It is awarded on the decision of the Dean of the Faculty of Arts to that student in Arts from the Maritime Provinces who shows the greatest proficiency in the examinations at the end of the session.

5. **Annie Macintosh Prize.**—The income of the sum of $1,043.97 ($425 of which was subscribed by the pupils and friends of the late Miss Annie M. Macintosh, and $618.97 bequeathed by the late Miss L. G. Macintosh), will be offered as a prize or prizes, to students of the Royal Victoria College in such subject, or for such work as the Faculty may determine.

6. **Penhallow Prize.**—The income of the sum of $731 collected by the Arts Undergraduates Society in 1911, will be assigned annually to the Department of Botany for a prize to be known as the "Penhallow" prize.

The names of those who have taken honours or certificates will be published in order of merit, with mention, in the case of students of the first and second years, of the schools in which their preliminary education has been received.

V. SCHOLARSHIPS, EXHIBITIONS AND PRIZES IN APPLIED SCIENCE.

I.—Awarded on the result of Special Examinations.

1. Two prizes, each of $10.00, presented by J. M. McCarthy, Esq., B.A.Sc., to students entering the third year, for proficiency in levelling and transit work.

2. Messrs. Babcock & Wilcox, Limited, offer every second year a scholarship of the value of $200.00 per annum, tenable for two years, to the best all-round man among the Engineering students who, having completed the work of the first and second years, is about to enter the third year, and who intends to make a special study of the subject of Steam Engineering. The conditions under which this scholarship is awarded may be ascertained on application to the Dean of the Faculty.

3. Scholarships covering four years' tuition in the Faculty of Applied Science are awarded annually by the Canadian Pacific Railway Company. These are open for competition to apprentices and other employees of the Company under twenty-one years of age, as well as to minor sons of employees, and the award is made on the result of the June Matriculation Examination. For full particulars as to number of scholarships available, etc., application should be made to C. H. Buell, Esq., Staff Registrar and Secretary, Pension Department, C.P.R. Offices, Montreal.

4. The P. S. Ross Entrance Exhibition. For particulars, see page 75.

II.—Awarded on results of Sessional Examinations or for special theses.

1. A British Association exhibition of $50.00 and a prize of $25.00, at the end of the third year, to the students who obtain the highest and the second highest aggregate marks, respectively, in the sessional examinations in strength of materials and mechanics of the third year.

2. Three prizes of $25.00, $15.00 and $10.00, at the end of the second year, to the students obtaining the highest, and the second and third highest, aggregate marks, respectively, in the sessional examinations in analytic geometry, calculus and mechanics of the second year.

3. A Scott exhibition of $50.00, founded by the Caledonian Society of Montreal, in commemoration of the centenary of Sir Walter Scott, and two prizes of $25.00 and $15.00, at the end of the first year to the students obtaining the highest, and the second and third highest aggregate marks, respectively, in the sessional examinations in the mathematics, descriptive geometry and physics of the first year.

4. Workshop Prize.—A prize of $20 00, presented by Mr. C. J. Fleet, B.A., B.C.L., for bench and lathe work in the wood-working department, open to students of not more than two terms standing in workshop practice.

5. A prize of $50.00, presented by Mr James Tighe, B.A.Sc., for research work in hydraulics.

6. An exhibition offered to graduates by Mr. A. E. Childs, M.Sc., for a special research on "The flow of gas through pipes under pressure."

7. A prize of $25.00, presented by Messrs. Anglins, Ltd., to the student obtaining the highest aggregate marks in the subject of architectural drawing in the second year of the Department of Architecture.

8. A prize of $25.00, presented by Messrs. Anglins, Ltd., to the student obtaining the highest aggregate marks in construction (Courses Nos. 24, 25, 26, 27) in the second and third years in the Department of Architecture.

9. The Louis Robertson Prize, founded by Mr. and Mrs. John A. Robertson, in memory of their son, John Louis Armour Robertson, who was killed in the Great War, on July 18th, 1916. To be awarded to the undergraduate student who ranks highest in Design in the final year of the course in Architecture.

10. The following prizes are offered for the best summer essays:—

To the students of the Civil Engineering course a prize of $25.00, presented by Charles Graham Drinkwater, Esq., B.Sc.

To the students of the Electrical Engineering course, from a friend, a prize of $25.00.

To the students of the Metallurgical course, a prize of $25.00, presented by Milton L. Hersey, Esq., D.Sc.

To the students of the Mechanical Engineering course, a prize of $25.00, presented by the Crosby Steam Gauge and Valve Co.

To the students of the Mining Engineering course, a prize of $25.00, by George E. Drummond, Esq.

Four prizes, each of the value of $25.00, are offered for competition to student members of the Canadian Society of Civil Engineers, for the best papers on subjects in any department of engineering. The summer theses prepared by students of this University are available for this competition.

Three prizes, each of the value of $25.00, and the President's gold medal, are offered for competition to student members of the Canadian Mining Institute for the best papers on mining subjects.

11. In the Department of Architecture two prizes will be offered at the opening of the session to those students of the Department submitting the best architectural drawings.

12. Certificates of merit are given to such students as take the highest place in the sessional and degree examinations.

III.—Awarded at the Discretion of the Faculty.

1. THE HON. ROBERT JONES' SCHOLARSHIP, having a value of One Hundred and Twenty-five Dollars ($125.00) per annum, "is granted from time to time to some poor student for the full term of study in the Faculty of Applied Science."

Application for this scholarship should be made through the Dean of the Faculty of Applied Science. In awarding the scholarship the standing of the student in the matriculation examination will be considered, and the scholarship will not be continued if the standing of the student at any time during his course proves to be unsatisfactory.

2. The Baylis Scholarship, founded in memory of Mr. and Mrs. James Baylis, of Montreal, and having an annual value of $100.00, is awarded to some student who is in need of financial assistance to complete his course on entering the second year of the Faculty. The scholarship will be continued during the third and fourth years, if the student's standing continues to be satisfactory.

Two of these scholarships may be available for the session 1918-19, but only one would be continued beyond the second year.

Applications should be made through the Dean of the Faculty of Applied Science.

3. Three research and teaching fellowships, of the value of $500 each, have been established in the Mining Department—one endowed in memory of the late Sir William Dawson, one endowed by Dr. James Douglas and a third supported by graduates in Mining in the name of the late Dr. B. J. Harrington. All three fellowships are awarded annually if suitable candidates offer.

4. Dr. James Douglas, a member of the Board of Governors, has provided for twelve, or more, tutorial bursaries in the Faculty of Applied Science. In assigning these bursaries account will be taken of the circumstances of the applicants as well as of their academic standing.

These bursaries have a value of $100.00 per annum, and carry the obligation of giving tutorial instruction equivalent to one evening a week, to the satisfaction of the Faculty Committee. Students in the third and fourth years of Applied Science only are eligible.

VI. MEDALS IN APPLIED SCIENCE.

1. The Governor-General's silver medal (the gift of His Excellency, the Duke of Devonshire) will be awarded for graduate research work.

2. A British Association medal is open for competition to students of the graduating class in each of the nine courses, and, if the examiners so recommend, will be awarded to the student taking the highest position in the final examinations. The British Association medals and exhibition were founded by the British Association for the Advancement of Science, in commemoration of the meeting held in Montreal in the year 1884.

3. A gold medal and three prizes of $25.00, offered by the Canadian Mining Institute. For further particulars, see page 233.

4. Honours.—On graduation, honours will be awarded for high standing in professional subjects.

VII. FELLOWSHIPS IN MEDICINE.

The A. A. Browne Memorial Fellowship:—The sum of $10,000 has been received by the Faculty from the committee of the A. A. Browne Memorial Fund. With this sum a fellowship has been established, to be known as the "A. A. Browne Memorial Fellowship." This fellowship is open to graduates of any recognized Medical School and is for the advancement of medical science, special preference being given to the subjects of obstetrics and gynæcology.

The James Douglas Research Fellowship:—The sum of $25,000 has been received from Dr. James Douglas, of New York, the proceeds to be devoted to coördinated research in the laboratories of pathology in or associated with the University.

The James Douglas Studentship:—A studentship in pathology, given by Dr. James Douglas, of New York, open to McGill graduates only, tenable for six years and of the value of $1,250 for the first year, increasing to $2,500.

VIII. MEDALS IN MEDICINE.

1. **The Holmes Gold Medal,** founded by the Medical Faculty in the year 1865, as a memorial of the late Andrew Holmes, Esq., M.D., LL.D., late Dean of the Faculty of Medicine, is awarded to the student of the graduating class who receives the highest aggregate number of marks in the different branches comprised in the medical curriculum.

The student who gains the Holmes Medal has the option of exchanging it for a bronze medal and the money equivalent of the gold medal.

2. **The Sutherland Gold Medal,** founded in 1878 by the late Mrs. Sutherland, in memory of her late husband, William Sutherland. M.D., formerly Professor of Chemistry in this Faculty, is awarded for the best examination in general and medical chemistry, together with a creditable examination in the primary branches. The examination is held at the end of the third year.

3. **The Wood Gold Medal,** founded by Casey A. Wood, M.D., is awarded to the student of the graduating class who receives the highest aggregate number of marks in the clinical branches of the final year. The winner of the Holmes Medal and the winner of the Final Prize are not permitted to compete for this medal.

IX. PRIZES IN MEDICINE.

1. **The Final Prize.**—A prize in books (or a microscope of equivalent value), awarded for the best examination, written and oral in the final branches. The Holmes' medalist is not permitted to compete for this prize.

2. **The Fourth Year Prize.**—A prize in books, awarded for the best examination, written and oral, in all the branches of the fourth year course.

3. **The Joseph Hils Prize.** (Founded by the late Dr. Joseph Hils, of Woonsocket, R.I.)—A prize in books, awarded to the student who obtains the highest number of marks for a special examination in materia medica and therapeutics.

4. **The Third Year Prize.**—A prize in books, awarded for the best examination, written and oral, in the branches of the third year.

5. **The Joseph Morley Drake, M.D., Prize.** (Founded by the late Joseph Morley Drake, M.D.)—A microscope, to be awarded to the student of the third year who obtains the highest number of marks for the examinations in pathology and bacteriology.

6. **The Second Year Prize.**—A prize in books for the best examination in all the branches of the second year course.

7. **The First Year Prize.**—A prize in books for the best examination in all the branches of the first year course.

X. EXHIBITIONS AND PRIZES IN LAW.

1. An exhibition, of the value of $50.00 per annum—to be known as the Alexander Morris Exhibition—has been founded in memory of the late Hon. Alexander Morris, M.A., D.C.L., of Toronto, Ont., and will be awarded to the student who obtains the highest standing in the second year.

2. Various money prizes (among the number being a prize of $15.00, given by the Junior Bar Association of the Province of Quebec, to the student of the final year who takes the highest standing in civil procedure), are awarded to the students of each year who obtain the highest distinction at the examination held at the close of the session. No prize will, however, be awarded to any student unless a sufficiently high standing is attained.

3. A travelling scholarship has been established by the Will of the late Sir William Macdonald, "for the purpose of enabling the English-speaking Law students to take a course of studies in France," the donor "deeming it of great importance that the English-speaking members of the legal profession should be proficient in the French language."

The value of this scholarship is the income derived from the sum of $20,000.

XI. MEDALS IN LAW.

1. **The Elizabeth Torrance Gold Medal** is awarded to the student who obtains the highest marks in the final examinations, provided that his answers are, in the estimation of the Faculty, of sufficient merit to entitle him to this distinction.

XII. MEDALS IN DENTISTRY.

The F. A. Stevenson Gold Medal, founded by Dr. F. A. Stevenson, of Montreal, is awarded to the student in the final year who stands first in the science and practice of Dentistry. The standing will be determined not only by the written and practical examinations at the end of the year, but by the general work of the student during the whole year.

XIII. PRIZES IN DENTISTRY.

Final Year Prize:—A prize in books will be awarded to the final year student who stands second in the class. The standing will be determined in a manner similar to that followed in the awarding of the gold medal.

Third Year Prizes:—Two prizes, First and Second, in books, will be awarded to third year students in the science and practice of Dentistry. The method of determining the winners of these prizes will be similar to that adopted in awarding the prizes in the final year.

For medals and prizes in the Faculty of Agriculture, see Macdonald College announcement.

FEES.

GENERAL REGULATIONS.

1. Fees shall be paid to the Bursar on or before October 10th. The registration ticket must be shown to the Bursar before the fee is paid. After October 10th an additional fee of $2.00 will be exacted of all students in default.

2. Immediately after October 20th the Bursar shall send to the Deans of the several Faculties a list of the registered students who have not paid their fees, on receipt of which the Deans shall cause their names to be struck from the registers of attendance, and such students cannot be readmitted to any class except on presentation of a special ticket, signed by the Bursar, certifying to the payment of fees.

3. Students registering after October 20th shall pay their fees at the time of registration, failing which they become subject to the provisions of regulation 2.

4. No fees will be refunded to partial students under any circumstances whatever.

MATRICULATION EXAMINATION FEES.

See page 46.

FEES IN ARTS

(For Regulations re payment, see above.)

Sessional fee for undergraduates and conditioned undergraduates $58.00

Sessional fee for undergraduates and conditioned undergraduates in the School of Commerce..... $58.00

(This includes fees for laboratories, library, gymnasium and graduation.)

At the request of the students themselves and by the authority of Corporation, an additional fee of $10.00 will be exacted from all men undergraduates and conditioned undergraduates, for the support of the Literary Society, the Undergraduates' Society, the Canadian Club, the Union, the McGill Daily and athletics. Women students pay an additional fee of $3.00 for athletics, and $2.50 for the Royal Victoria College Undergraduates' Society.

Fees for partial students—(first and second years).—$16.00 per session for one course† and $10.00 for one half-course† of lectures, including the use of the library; $12.00 per session for each additional course; $8.00 per session for each additional half-course. In addition there will be a fee of $3.00 for athletics.

Fees for partial students—(third and fourth years).—$22.00 per session for one course† and $13.00 for one half-course† of lectures, including the use of the library; $20.00 per session for each additional course; $11.00 per session for each additional half-course. In addition there will be a fee of $3.00 for athletics.

Partial students taking the full curriculum in any one year pay the same fees as undergraduates in that year.

For fees payable by students taking the double course in Arts and Applied Science, see page 89; and for the fees payable by those in the double course in Arts and Medicine, see page 90.

Graduates in Arts of this University are allowed, on payment of one-half of the usual fees, to attend all lectures in the undergraduate course, except those for which a special fee is exigible. Graduates of other universities attending full courses in affiliated theological colleges are given the like privilege.

For fees for Extension Courses, given in connection with the School of Commerce, see pages 162 to 167.

Special fees:—

Supplemental examination in any subject or any part of a subject, taken at the regular date fixed by the Faculty ..... $ 2.00

Supplemental examination, when granted at any other time than the regular date fixed by the Faculty, for each examination period..... 5.00

All fees for supplemental examinations must be paid to the Bursar, and the receipts shown to the Dean before the examination.

Fee for the degree of B.A. or B.Sc. (Arts) conferred in absentia (except when the candidate has been specially exempted by the Faculty)..... $20.00

Caution Money.—Every student is required to deposit with the Bursar the sum of $5.00, as caution money, to cover damages done to furniture, apparatus, books, etc. This amount, less deductions (if any), will be returned at the close of the session.

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† The lectures and laboratory work, if any, in one subject in any of the four college years constitute a "course," if occupying three hours per week; a "half-course," if occupying less than three hours per week.

FEES IN APPLIED SCIENCE.

(*For Regulations re payment, see page 87.*)

Sessional fee for the undergraduate course in Architecture.. $147.00
Sessional fee for all other undergraduate courses..... 197.00

(Students taking the summer schools in September are required to pay the sum of $35 (includes Caution Money Deposit), which will be placed to their credit on the fee for the session.)

At the request of the students themselves, and by authority of Corporation, an additional fee of $10.00 will be exacted from all undergraduates and conditioned undergraduates for the support of the Literary Society, the Undergraduates' Society, the Canadian Club, the Union, the McGill Daily and athletics.

Graduates of this Faculty taking an additional undergraduate course will pay one-half of the graduate fee.

Students taking the six year double course in Arts and Applied Science shall pay full fees in Arts for the first three years of their course and the following fees in Applied Science:—

Sessional fee for second and third years of double course (summer school in September, see page 169)..... $ 50.00
Sessional fee for fourth, fifth and sixth years of double course 197.00

The fees for partial students are:—$4.00 for library, $3.00 for athletics, $1.00 for the Undergraduates' Society, and a fee at the rate of $7.00 for an hour a week of instruction during the academic year, but the maximum fee shall in no case exceed the full undergraduate fee.

Caution Money.—Every student is required to deposit with the Bursar the sum of $10.00, as caution money, to cover damage done to furniture, apparatus, books, etc. This amount, less deductions (if any), will be returned at the close of the session.

Fee for the degree of B.Sc., conferred in absentia (except when the candidate has been specially exempted by the Faculty)..... $ 20.00

For a regular supplemental examination, the fee is $2.00 for each subject; for a special supplemental examination, $5.00. These fees must be paid to the Bursar of the University and receipt for the same shown to the Examination Committee not later than the day before the examination.

FEES IN MEDICINE.

(For Regulations re payment, see page 87.)

Sessional fee for the undergraduate course	$147.00
Fee for athletics, Union, etc.*	10.00
Rent of microscope (see page 270)	7.00
Caution money (deposit)†	10.00
	$174.00
Graduation fee for the degree of M.D., C.M.‡	$ 30.00

Double course students in Arts and Medicine, qualifying for the degrees B.A. or B.Sc. and M.D., shall pay full fees in Arts for two years and in Medicine for five. They shall also pay $30.00 as a graduation fee in the Faculty of Arts, as well as in Medicine.

Sessional fee for students repeating a session..... $35.00

Repeating students must also pay, in addition to the above, $10.00 for athletics, etc., and make the usual caution money deposit of $10.00.

Fee for students from other colleges who have paid full fees there for courses to be taken..... $35.00

These students are also required to pay in addition, $10.00 for athletics, etc.,* the hospital fees exacted in the year to which they are admitted, and to make the usual caution money deposit of $10.00.

An *ad eundem* fee of $10.00 will be charged students entering from another university in the second, third, fourth or fifth year of the course.

Partial students will be admitted on payment of special fees.

Fee for a supplemental examination	$ 5.00
Fee for the course in Public Health and diploma	100.00

* At the request of the students themselves and by authority of Corporation, this additional fee of $10.00 is exacted from all men undergraduates and conditioned undergraduates for the support of the Literary Society, the Undergraduates' Society, the Canadian Club, the Union, the McGill Daily, and athletics.

† The caution money deposit is intended to cover breakages in the different laboratories, etc. The amount of the deposit, less deductions (if any), will be returned at the close of the session.

‡ When the degree is conferred in absentia an additional fee of twenty dollars will be exacted, unless the candidate has been specially exempted by the Faculty.

FEES IN DENTISTRY.

Students in Dentistry pay the following fees:—

Sessional fee	$125.00
Fee for athletics, the Union, etc.*	10.00
Rent of microscope (first and second year students)	7.00
Caution money deposit†	10.00
	$152.00

Graduation fee for the degree of D.D.S.‡ $30.00

FEES IN PHARMACY.

Registration fee (payable in advance)	$ 5.00
Fee for athletics (payable in advance)	3.00
Course in Junior Chemistry	20.00
Course in Senior Chemistry	20.00
Course in Junior Materia Medica and Pharmacy	20.00
Course in Senior Materia Medica and Pharmacy	20.00
Course in Practical Pharmacy	20.00
Course in Botany	15.00

Certain fees are payable to the Pharmaceutical Association of the Province of Quebec for registration, examinations, and for the licentiate in pharmacy (see announcement of Department of Pharmacy).

The fee of $10.00 *for the Union, McGill Daily, etc., etc., is optional for students in Pharmacy.*

The sum of $5.00 *is collected from all students of Pharmacy at the time of registration as "caution money," to cover breakages in the laboratories or lecture rooms. The balance will be refunded at the end of the session.*

The University supplies all reagents and apparatus in the various laboratories. Charge is made for breakages only.

Partial students will be admitted to one or more courses on payment of special fees.

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* See footnote on next page.
† See footnote on next page.
‡ See footnote on next page.

FEES IN LAW.

(*For Regulations re payment, see page 87.*)

Registration fee	$ 5.00
Sessional fee for the undergraduate course	77.00
Fee for athletics, the Union, etc.*	10.00
Graduation fee‡	12.50
Fee for a Regular Supplemental Examination	2.00

Students taking the course leading to the degree of LL.B. shall pay full fees in Arts for the first two years and full fees in Law for the third and fourth years.

Students taking the six year double course in Arts and Law shall pay full fees for each of the four years in Arts and full fees for each of the three years in Law.

Fees for partial students:—

Registration fee	$ 5.00
For course in Roman Law	20.00
For each of the following courses: successions, criminal law, commercial law, obligations, civil procedure	15.00
For each of the shorter courses	10.00
Athletics fee	3.00

Caution Money.—Every student is required to deposit with the Bursar the sum of $5.00, as caution money, to cover damage done to furniture, loss of books, etc. This amount, less deductions (if any), will be returned at the close of the session.

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* At the request of the students themselves and by authority of Corporation, this additional fee of $10.00 is exacted from all men undergraduates and conditioned undergraduates for the support of the Literary Society, the Undergraduates' Society, the Canadian Club, the Union, the McGill Daily, and athletics.

† The caution money deposit is intended to cover breakages in the different laboratories, etc. The amount of the deposit, less deductions (if any), will be returned at the close of the session.

‡ When the degree is conferred in absentia an additional fee of twenty dollars will be exacted, unless the candidate has been specially exempted by the Faculty.

FEES IN THE GRADUATE SCHOOL.

For the resident course leading to the degree of M.A., M.Sc. or LL.M.	$40.00
Registration fee for the non-resident courses for M.A. or M.Sc.	15.00
Annual registration fee thereafter for these courses	5.00
For each year of the course leading to the degree of Ph.D.	40.00
Graduation fee for M.A., M.Sc. or LL.M. (resident course)	20.00
" " " (*In absentia*)	40.00
" " Ph.D.	30.00
Fee for the degree of D.Sc.	80.00
" " " D.Litt.	80.00
" " " D.C.L.	80.00

The examination and graduation fee is payable when the candidate presents himself for examination and is not returnable if he is unsuccessful. No thesis can be accepted unless it is accompanied by a receipt from the Bursar for this fee. If, however, a candidate for the degree of M.A. or M.Sc. fails he may present himself in a subsequent year without further payment of fees. A candidate for the degree of Ph.D., D.Sc. or D.Litt., in case of failure, may present himself in a subsequent year upon payment of an additional sum amounting to one-half of the usual fee for this degree.

Lecturers, tutors and demonstrators in the University who are proceeding to the degree of Master of Arts, Master of Science, or Doctor of Philosophy, shall, so long as they remain members of the teaching staff, be exempt from the tuition fee, but will be required to pay the fee for graduation in every case. In the event of their leaving the staff after one year of the course, they are required to pay a tuition fee of $20.00 in the M.A. or M.Sc. course and the prescribed fee in the Ph.D. course.

No fee shall be charged for the degree of LL.D., granted *honoris causa*.

FEES IN MUSIC.

Regular students, per session	$150.00

(This sum will also cover the fees for the diploma or degree examination at the end of each year.)

Senior partial students, per term of 12 weeks	$35.00
Junior partial students, per term of 12 weeks	28.00
Examination and graduation fee for Mus. Doc.	80.00

The fee for the degree of Mus. Doc. is payable in two instalments. Forty dollars must be paid when the candidate submits his exercise.

If the exercise is not approved, he may in a subsequent year submit another exercise upon payment of $20.00. The second instalment of $40.00 must be paid before the subsequent examination. If the candidate be unsuccessful, he may in a subsequent year present himself again for examination upon payment of $20.00.

Information regarding fees to be paid by students for class work and by occasional students, as well as regarding fees for certificates and examinations, when these are not covered by the regular fee, will be found in the special syllabus issued by the Conservatorium of Music.

MISCELLANEOUS FEES.

Gymnasium for partial students, men (optional)	$2.50
Gymnasium for partial students of the Royal Victoria College (optional)	5.00
Certificate of standing (general)	1.00
Certificate of standing, accompanied by a statement of classification in the several subjects of examination	2.00

All applications for certificates must be addressed to the Registrar of the University, accompanied by the required fee.

No certificates are given for attendance on lectures unless the corresponding examinations have been passed.

MORALS AND DISCIPLINE.

1. University discipline shall be exercised by the several Faculties, and by the Committee on Morals and Discipline, subject in the cases hereinafter mentioned to revision or confirmation by Corporation.

2. Subject to the provisions of the following section, each Faculty shall be entitled to exercise University discipline over its own students.

3. All cases of discipline involving the interests of more than one Faculty, or of the University in general, shall be dealt with by a standing committee of Corporation, to be known as the Committee on Morals and Discipline, which shall consist of the Vice-Principal, the Deans of the several Faculties, one member of the Board of Governors and another member of Corporation who must be outside of the University staff. The two members last named shall be appointed annually at the regular meeting of the Corporation in February. The Committee shall have power to add to their number the President and Vice-President of the Students' Council in cases in which that body has taken action and made a report.

4. All such cases of discipline as are referred to in sub-section 3 shall be reported to the Principal, or, in his absence, to the Vice-Principal, or, in the absence of both, to the senior Dean present in the city. If the Principal, or, as the case may be, the Vice-Principal or the Dean, deems action necessary, the matter shall be reported to the Committee on Morals and Discipline. Corporation shall also have the power to report such matters to the said Committee.

5. When sentence of expulsion, or of suspension for more than three months, has been pronounced or recommended by a Faculty, or by the Committee on Morals and Discipline, the Corporation may entertain an appeal, which shall be final.

6. "University discipline" shall mean any appropriate method of exercising authority over students, and shall, but without prejudice to the foregoing generality, include the power of expulsion, suspension, disqualifying from competing for scholarships, exhibitions, medals, prizes or honours, imposing fines, not exceeding $25.00, on any student, levying assessments for damage done, reporting to parents or guardians and admonition.

7. Any student found guilty of immoral, dishonest, disorderly or improper conduct, or of wrongfully causing damage to person or property, shall be liable to University discipline.

8. If on an occasion of general disorder on the part of a year, class, or group of students, damage be done to University property, or acts committed meriting discipline, and the individuals who have done such damage, or committed such acts, have not been discovered, an assessment to cover the damage may be laid, or a fine imposed, or both, on all the members of such year, class or group.

9. While in college, or in the college grounds, students shall conduct themselves in the same orderly manner as in the class-rooms. Smoking is prohibited in the college buildings, except in such rooms, if any, as may be set apart for that purpose. Any professor observing improper conduct on the part of a student in the college buildings or grounds may admonish him, and, if necessary, report him to the Dean of the Faculty in which he is enrolled. Without, as well as within the walls of the college, every student is required to maintain a good moral character.

COLLEGE GROUNDS AND ATHLETICS.

The management of the college grounds and of out-door athletics and sports is under the control of the Athletics Committee of Corporation.

This Committee is responsible for the general maintenance of all University grounds and retains the ultimate authority and power of supervision in all matters affecting athletics in the University. All matters whch may in any way affect athletics must be referred to this Committee and its approval must be obtained before any departure is made from the authorized routine.

The following extracts are made from the rules and regulations of the Committee, for the guidance of members of the University and the several athletic clubs and associations which are from time to time permitted to use the grounds:—

During the summer season the Sherbrooke street gates shall be closed between 10 p.m. and 6 a.m. every day, and the University and McTavish street gates between 6 p.m. and 7 a.m. on week days and the whole day on Sunday.

Such persons as are entitled to use the grounds shall be provided with tickets, renewable each year. Those entitled to tickets are the members of the University and prominent benefactors, and the families of Governors and Professors.

The several clubs may be permitted to issue special tickets, entitling the holders to admission to the grounds for the purpose of viewing matches, or for other special occasions of public interest.

All students entering the University for the first time and all others desirous of taking part in football matches, or otherwise engaging in violent athletic contests, must pass a medical examination, to be held under the direction of the Medical Director of Physical Education during the month of October. A complete record of all such examinactions shall be kept by the Director or some other officer appointed to this duty. The managers and captains of clubs, or other responsible executive officers, are required to insist upon the strict observance of the rule in regard to medical examination, and all the rules and regulations of the Committee which concern them.

All clubs must submit their regulations, rules, and by-laws, and any changes in the same, for the approval of the Committee. They

must make application for the use of such portions of the grounds as they require, and for any special privileges.

Clubs must not engage in matches with outside clubs, except with the approval of the Committee.

During the session, and including the Christmas holidays, all teams and individual students desiring to participate in outside athletics* must first obtain a sanction from the Athletic Association, such sanction to be approved by the Athletics Committee of Corporation.

Students who participate in outside athletics without having received such sanction may be suspended from the University by the Athletics Committee of Corporation, if the consent of the Principal has been given, until Corporation shall meet to deal with the matter.

The Athletic Association must submit its programme for each year for the approval of the Committee.

All students in good standing who are taking a course of study held to be sufficient by a special committee of the Faculty in which they are enrolled will be allowed to take part in athletics, subject, however, to the general regulation regarding medical examination.

Suspension from lectures for any cause, or absence from more than one-eighth of the total number of lectures given in any course, as shown by the monthly reports furnished to the Dean of each Faculty by the several professors and lecturers, shall be considered as sufficient ground to disqualify a student for engaging in athletic contests.

All students of the University are required to pay a fee of three dollars ($3.00) for the use of the grounds (this is included in the general fee of $10.00 paid by undergraduates). The amount so paid is handed over to the Executive of the Students' Council (less about $800.00, which is expended in the upkeep of the grounds in connection with athletics), and is by this body expended in the interest of college athletics, under the general direction of the Athletics Committee of Corporation.

The amount derived as grounds and athletics fees from the students of the Royal Victoria College is placed at the disposal of the Committee in charge of the grounds, for expenditure in the interests of women-students.

The annual sports of the University are held on the third Friday of October in each year. The day is observed as a holiday.

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* Outside athletics is interpreted to mean those athletics over which the Athletic Association of the University or the Canadian Intercollegiate Athletic Union does not have control.

UNIVERSITY ATHLETIC ASSOCIATION.

All matters connected with athletics at the University are under the immediate supervision of the University Athletic Association, which, in turn, is responsible to the "Athletics Committee of Corporation." The executive of the Athletic Association consists of the presidents of the various clubs of the Association, twelve in number.

The Track Club is entrusted with the regulation and encouragement of "track and field athletics"; the management of the Interclass sports and of the annual University sports.

The Rugby Football Club is represented by a senior and intermediate team in the Intercollegiate Union, and a junior team in the Q.R.F.U. In addition to these championship matches, a series of interclass matches is played annually for the "Wood Cup."

The Skating and Hockey Club has a well-established reputation. The Hockey Club is represented by senior and intermediate teams in the Intercollegiate League. As in football, a series of inter-class games is played annually, in this case for the "Capper-Porter Trophy."

The Association Football Club, the Basket-Ball Club, the Boxing Club, the Cricket Club, the Harriers' Club, the Lawn Tennis Club, the Wrestling Club, the Fencing Club, the Polo Club, and the Swimming Club are the remaining clubs under the Association. Most of them conduct inter-class matches, and have a senior team, which represents the University in outside matches. The Association Football, Basket-Ball, Boxing and Wrestling Clubs, and the Tennis and Swimming Clubs are also represented in Intercollegiate Unions.

PHYSICAL EDUCATION.

For particulars, see page 295.

ACADEMIC DRESS.

Professors, lecturers and students are required to wear academic dress at lectures, except in those cases in which a dispensation shall have been granted by the Faculty.

Undergraduates shall wear a plain black stuff gown, not falling below the knee, with round sleeve cut above elbow.

Bachelor of Arts.—Black stuff gown, falling below knee, with full sleeve cut to elbow and terminating in a point (similar to that of the Cambridge B.A.); hood, black silk, lined with pale blue silk and edged with white fur.

Bachelor of Science.—The same gown as Bachelors of Arts; hood, black silk, lined with yellow silk and edged with white fur.

Bachelor of Science in Agriculture.—The same gown as Bachelors of Arts; hood, black silk. lined with dark green silk and edged with white fur.

Bachelor of Civil Law.—The same gown as Bachelors of Arts; hood, black silk, lined with French grey silk and edged with white fur.

Bachelor of Laws.—The same gown as Bachelors of Arts; hood, black silk, lined with scarlet silk and edged with white fur.

Bachelor of Architecture.—The same gown as Bachelors of Arts; hood, black silk, lined with white silk and edged with white fur.

Bachelor of Music.—The same gown as Bachelors of Arts; hood, black silk, lined with pale mauve silk and edged with white fur.

Master of Arts.—Black gown of stuff or silk, falling below knee, with long sleeve with semi-circular cut at the bottom (similar to that of the Cambridge M.A.); hood, black silk, lined with pale blue silk.

Master of Science.—The same gown as Masters of Arts; hood, black silk, lined with yellow silk.

Master of Laws.—The same gown as Masters of Arts; hood, black silk, lined with scarlet silk.

Doctor of Medicine.—The same gown as Masters of Arts; hood, scarlet cloth, lined with dark blue silk.

Doctor of Dental Surgery.—The same gown as Masters of Arts; hood, scarlet cloth, lined with pink silk.

Doctor of Laws.—The same gown as Masters of Arts; hood, scarlet cloth, lined with white silk.

Doctor of Literature.—The same gown as Masters of Arts; hood, scarlet cloth, lined with pale blue silk.

Doctor of Science.—The same gown as Masters of Arts; hood, scarlet cloth, lined with yellow silk.

Doctor of Civil Law.—The same gown as Masters of Arts; hood, scarlet cloth, lined with French grey silk.

Doctor of Music.—The same gown as Masters of Arts; hood, scarlet cloth, lined with pale mauve silk.

Doctor of Philosophy.—The same gown as Masters of Arts; hood, scarlet cloth, lined with pale green silk.

Doctors of Laws, Doctors of Civil Law, Doctors of Literature, Doctors of Science, Doctors of Philosophy and Doctors of Music shall be entitled to wear for full dress a robe of scarlet cloth (similar in pattern to that of the Cambridge LL.D.), faced with silk of the same colour as the lining of their respective hoods.

All hoods shall be in pattern similar to that of the masters of Arts of Cambridge University.

Undergraduates and graduates shall wear the ordinary black trencher with black tassel, but Doctors of Laws, Doctors of Civil Law, Doctors of Literature, Doctors of Science, Doctors of Philosophy and Doctors of Music shall wear for full dress a black velvet hat with gold cord, similar to that worn by Doctors of Laws of Cambridge University.

Samples of the colours of the linings of all hoods shall be kept for inspection in the office of the Registrar.

FACULTY OF ARTS.

COURSES FOR THE DEGREE OF B.A.

Students may enter the Undergraduate Course by passing either the Junior or the Senior Matriculation Examination. In the former case, in order to obtain the degree of B.A. or B.Sc., they are required to attend regularly the prescribed courses of lectures for four years; in the latter, for three. No course or courses can be counted towards a degree or diploma in the Faculty of Arts except such as have been taken and passed after matriculation requirements have been satisfied and according to the regulations governing the various years of the Undergraduate Course. Undergraduates are arranged in years, from first to fourth, according to their academic standing. The respective conditions of passing into the last three years of the course are stated on page 113.

An undergraduate may proceed to the degree of B.A. by taking either the Ordinary Course or some one of the Honour Courses prescribed.

I. ORDINARY COURSE FOR THE DEGREE OF B.A.

First Year.

Greek 1 *or* 2, *or* **Latin** 1.
English 1 **and** 2.
History 1.
Mathematics 1 *or* 2.
Latin 1, *or* **Greek** 1 *or* 2, *or* **French** 1, *or* **German** 1 (a) *or* 2.
Physics 1.

Details of the work in each subject are given on pages 116 to 142.

French cannot be taken as a qualifying option in the first year, except by students who have passed the matriculation examination in that subject, or, failing this, are able to satisfy the Head of the Department that they are qualified to proceed with the course.

German may be taken instead of trigonometry, in addition to two other foreign languages, by students who intend to read for honours in modern languages or English. This option will, however, be granted only on the recommendation of the departments concerned.

Students of the first year who are taking Latin and Greek with a view to reading for honours, may, on the recommendation of the Department of Classics, substitute a modern language for physics.

Application to take additional courses must be made to the Dean at the beginning of the session.

Advanced Courses.—A student qualified to take work of a more advanced character than the ordinary course of the first year in any subject, shall, with the consent of the B.A. Advisory Committee, take such advanced work in that subject as the department concerned may recommend. Students taking advanced courses may be excused from the corresponding ordinary courses on the recommendation of the department.

Commercial Course.—An outline of the first year course for the degree of Bachelor of Commerce will be found on page 150.

Second Year.

Compulsory.

English 3.
Greek 3 *or* **4.**
Latin 2.
} any one.

Optional Courses.

From the following subjects any three, or three and a half, in wholes or halves must be selected. For the degree of B.A. two and a half courses must be taken from Group II, but not more than two full courses can be selected from this Group in the Second Year. The subjects of Group II are not compulsory for students intending to take honours in the Third and Fourth Years. The asterisk denotes a half course.

GROUP I.		*GROUP II.*	
COURSES.	PREREQUISITES.	COURSES.	PREREQUISITES.
Economics *1		Botany *2	
English 4	1 *and* 2	Chemistry 1	
French 3	1	Geology 1	
German 4	1 *or* 2	Physics 2	1
Greek 3 *or* 4	1 *or* 2	Zoology *2	
History *2	1	Zoology *6	2
Latin 2	1		
Mathematics 3	1		
Philosophy *1, *2, *3 any two			
Semitic Languages 1			

An exemption from any one of the subjects specified above, except English composition, may be granted to honour students in mathematics who take both the ordinary and the advanced course in mathematics, but to no others.

Commercial Course.—An outline of the second year course for the degree of Bachelor of Commerce will be found on page 151.

Third and Fourth Years.

Four courses are to be selected in each year. Of the eight, six must be chosen from Group I, and of these six, five must be chosen in one department, or from courses which are indicated as allied to that department, but not less than three and not more than four courses can be taken in any one department, and not more than three courses in any one department in the same year. In the whole B.A. course, at least two and a half courses are to be taken from Group II. No course can be selected unless the prerequisite courses, if any, have already been taken. An asterisk denotes a half course.

GROUP I.

Department.	Courses Offered.	Prerequisites.	Allied Courses.
Classics	Latin 3, 4 Greek 5, 6	Latin 2 Greek 3 *or* 4	Any one full course in any other department of Group I.
Economics and Political Science	*1 2 3 *4, *5, *6, *7, *8, *9, *10, *11, *12	..... *1 ..... 1 *or* 2	English Literature, but not more than one full course; History, but not more than one full course.
Education	*1, *2	.....	.....
English	4, *5, *7, *9, 13, *16, *17, *21 14 *10, *12, *18, *19, *22	3 13 *5, *7, *9, *16, *17, *21 any two.	Any ancient or modern language, but not more than two full courses; History, but not more than one full course; Philosophy or Economics and Political Science, but not more than one full course.
History	*2, 3, *7, 9, *11	1	Economics and Political Science, but not more than one full course; English, but not more than one full course.

GROUP I.—Continued.

Department.	Courses Offered.	Prerequisites.	Allied Courses.
Mathematics	3	1 *or* 2	Any two full courses in any department of Group I.
	4, *6, *5 and 12	3	
	7	4	
Modern Languages	French 5, 6	French 3	Any language or languages, Philosophy or History, but not more than two full courses.
	German 5, 6	German 4	
Philosophy	*1, *2, *3, 4		Classics, Modern Languages, Education, Economics and Political Science, but not more than two full courses.
	*5	4	
	*6	(*1, *2, *3) any two.	
	7, *8, 9, 11, *12, *13, *14	*1 and *2	
	*10	7	
	*15	(*1, *2, *3) any two. and 4	
Semitic Languages	2 *or* 3 *or* 6	1	Classics, History, Philosophy, but not more than two full courses.
	4 *or* 5	2 *or* 3 *or* 6	

GROUP II.

(Science Subjects.)

Department.	Courses Offered.	Prerequisite.
Biology	Botany *2	
	4, *5	*2
	7	4
	Zoology *2	
	3, *6	*2
	5	3
Chemistry	1	
	2	1
	3	2
Geology	1	
	*2, (*3 and 4)	1
Physics	2	1
	3	2
	10	3

GROUP III.

(Subjects taught in other Faculties.)

FACULTY.	COURSES OFFERED.	PREREQUISITE.
Law	**Jurisprudence**	
	Legal History	
	Roman Law	

No selection of courses can be made that conflicts with the time-table (see page 143).

Every undergraduate shall, on entering the Third Year, register in the Office of the Dean a statement of the work he intends to take during the remainder of his undergraduate course. Subsequent changes can be made only with the approval of the Dean.

Details of the work in each subject are given on pages 116 to 142.

For regulations whereby the double course in Arts and Applied Science can be taken in six years or Arts and Medicine in seven, see pages 113 to 115.

SUMMER READINGS.

(*For students entering the Second, Third and Fourth Years.*)

Summer readings are obligatory for every undergraduate, and conditioned undergraduate in the Faculty.

The readings prescribed for the session 1918-19 are posted on the notice boards of the Arts Building and the Royal Victoria College.

The summer readings for honour students may, with the approval of the Dean, be prescribed by the department concerned.

Students will be required at the beginning of the session (Wednesday, October 2nd, p.m.) to pass an oral examination in each of the books selected by them.

Students who fail to do this must, before the end of the first term, take a written examination; failure to pass this examination involves the same penalties as failure in one subject in the sessional examinations.

II. HONOUR COURSES FOR THE DEGREE OF B.A.

Honours of the first, second or third class will be awarded in any of the following Honour courses:—

Biology.
Chemistry.
Chemistry and Biology.
Classics.
Economics and Political Science.
English.
English and French.
English and German.
English and Philosophy.
Geology and Mineralogy.
Greek and English.
Greek and Hebrew.
History.
History and English.
Latin and English.
Latin and French.
Latin and German.
Mathematics and Physics.
Modern Languages.
Philosophy and German.
Philosophy and Psychology.
Semitic Languages.

Honour lectures are open to candidates for the ordinary degree in the third and fourth years, on the recommendation of the department concerned and with the approval of the Dean.

No student is allowed to take more than one Honour course.

A student who has failed to obtain honours in the third year may, on the recommendation of the department, be permitted to enter the ordinary course of the fourth year.

COURSES FOR THE DEGREE OF B.Sc. (Arts).

An undergraduate may proceed to the degree of B.Sc. (Arts) by taking either one of the two Ordinary Courses or an Honour Course.

I. ORDINARY COURSE.

There are two Ordinary Courses, designated respectively A and B.

Ordinary Course A.

This course has been arranged to give students a thorough training in science as a preliminary to entering a technical business or profession, or for teaching.

First Year.

Chemistry 1.
English 1 and 2.
French 2.
German 1 (b) *or* **3.**
Mathematics 1.
Physics 1.

Special arrangements will be made for students who have passed the matriculation examination in German.

Details of the work in each subject are given on pages 116 to 142.

SELECTION OF COURSES.

Second Year.—In addition to English Composition, which is compulsory, three subjects must be chosen, of which two must be selected from Group I below; the third subject may be taken from Group I or Group II. *Third and Fourth Years.*—The three subjects selected in the second year must be continued in the third and fourth years. If biology, however, which consists of a half-course in botany and a half-course in zoology, is chosen in the second year, it may be followed in the third and fourth years by a full course in each of those subjects, in which case one of the science subjects chosen in the second year need not be continued.

GROUP I.

SUBJECTS.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
Biology	**Zoology 2. Botany 2.**	**Zoology 3, *or* 5; *or* Botany 7.**	**Botany 7; or Zoology 3 *or* 5.**
Chemistry.	**2 *or* 3; and 4.**	**2 *or* 3; and 9.**	**5 *or* 6; and 8.**
Geology.	**1.**	**5 and 6.**	**2, 3, 4.**
Mathematics.	**3.**	**4 and 5.**	**7.**
Physics.	**2 and 3.**	**4 and 7.**	**10, 12, 14.**

GROUP II.

SUBJECTS.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
Economics and Political Science.	**2 *or* 3.**	**Any two of:—Economics and Political Science 4 to 12.**	**Any two of Economics and Political Science, 4 to 12, not chosen in the third year.**
English.	**3 and 4.**	**Any two of:—5, 7, 9, 10.**	**Any two, not taken in the third year, of 5, 7, 9, 10, 12 and 22.**
History.	**3; *or* 7 and 11.**	**3; *or* 7 and 11 (whichever has not been taken in the second year).**	**9.**
Philosophy.	**Any two of:—1, 2, 3.**	**4 *or* 7 *or* 11 *or* any two of:—6, 8, 12, 13, 14.**	**4 *or* 7 *or* 11 (whichever has not been taken in the third year) *or* 9 *or* any two of:—5, 6, 8 10, 12, 13, 14, 15.**

Students who so desire may on application be permitted to substitute Education in either the third or fourth year for one course in Group II.

Ordinary Course B.

DOUBLE COURSE B.Sc., M.D.

This course in the physical and biological sciences is specially devised for students who might wish to proceed to a degree in Medicine or to advanced work in physiology, biological chemistry, pharmacology or allied subjects. Students intending to enter the Faculty of Medicine must pass the matriculation examination in Latin before admission to the third year of the B.Sc. course.

Graduates in this course are qualified to enter the third year in the Faculty of Medicine.

First Year.

English 1 and 2.
German 1 (b) *or* 3.
Mathematics 1.
Physics 1.
Chemistry 1.
French 2.

Second Year.

English Composition 3.
Physics 2 and 3.
Biology (Botany 1, Zoology 1).
Chemistry 3.

Third Year.

Chemistry 2 and 4.
Zoology 5.
Anatomy (as in first year Medicine).

Fourth Year.

Chemistry 7 and 10.
Anatomy (as in second year Medicine or Special Advanced Biology).
Physiology (as in second year Medicine).

II. HONOUR COURSE FOR THE DEGREE OF B.SC.

Students proposing to take an Honour Course must select one principal subject from Group 1 (page 108) and must satisfy the department concerned as to their qualifications to continue it. The

exact courses of study will be specified by the department concerned. All students will be required to take a course in scientific German.

B.Sc. IN AGRICULTURE.

Particulars regarding the course for the degree of Bachelor of Science in Agriculture, the first two years of which are taken in the Faculty of Arts, are given in the Macdonald College Announcement.

DEGREE OF BACHELOR OF HOUSEHOLD SCIENCE (B.H.S.).

The first two years are to be taken in the Faculty of Arts, McGill University and the last two in the School of Household Science, Macdonald College.

Proposed subjects to be taken in the Faculty of Arts, which may be either in the B.A. or the B.Sc. Course.

First Year (B.A. Course).

Greek 1 *or* 2, *or* **Latin** 1.
English 1 **and** 2.
History 1.
Mathematics 1 *or* 2.
Latin 1, *or* **Greek** 1 *or* 2, *or* **French** 1, *or* **German** 1 (a) *or* 2.
Physics 1.

French is strongly recommended as the alternative language.

Second Year (B.A. Course).

English 3.
Latin 2 *or* **Greek** 3 *or* 4. } Compulsory.

For the remaining three, or three and a half courses, the following are required:

Botany 2.
Chemistry 1.
Zoology 2.
English 4 *or* **French** 3, with the remaining possible half course at the choice of the student from **Economics** 1 *or* **History** 2 *or* **Philosophy** 1 *or* 2 *or* 3.

First Year (B.Sc. Course).

Chemistry 1.
English 1 and 2.
French 2.
German 1 (b) *or* 3.
Mathematics 1.
Physics 1.

Second Year (B.Sc. Course).

English 3.
Biology:—**Botany** 2, **Zoology** 2.
Chemistry 2; and one course from among the following:—**Geology** 1; **Mathematics** 3; **Physics** 2 and 3; **Economics and Political Science** 2 *or* 3; **English** 4; **History** 3 *or* 5 and 7; **Philosophy**, any two of 1, 2, 3.

Proposed subjects to be taken in the School of Household Science at Macdonald College.

Third Year.

Economics (1 hour).
English (2 hours).
Principles of Teaching (1 hour—half-year).
Bacteriology (1 hour lecture, 2 laboratory periods—half-year).
Biology (1 hour lecture, 1 laboratory period).
Chemistry (1 hour lecture, 2 laboratory periods).
Foods (2 hours lecture, 2 laboratory periods).
The Home (1 hour lecture, 1 laboratory period).
Textiles and Clothing (3 hours—half-year).

Fourth Year.

English (2 hours).
Principles of Teaching (2 hours lecture—practice teaching).
Bacteriology (2 hours lecture, 1 laboratory period).
Chemistry (2 hours lecture, 2 laboratory periods).
Physics (3 hours—half-year).
Foods (2 hours lecture, 2 laboratory periods).
The Home (2 hours).

PARTIAL STUDENTS.

Students desiring to take a Partial Course in Arts are required to pass the matriculation examination in the subject or subjects which they intend to study, or, failing this, they must satisfy the Head of the Department as to their ability to follow the course. Subject to the above limitations, lectures are open to Partial Students in both Honour and Ordinary Courses, but no course or courses taken by such students can count for a degree. Medals, scholarships, exhibitions and prizes shall not be awarded to Partial Students. A certificate of standing can be obtained from the Dean if requested. A partial student who fails in any subject at the First Term Examinations shall be allowed to continue that subject only on the recommendation of the Head of the Department concerned.

EXAMINATIONS IN ARTS.

There are two examination in each session, the Intermediate and the Final. Intermediate Examinations are held either at the end of the first term, or at such intervals during the session as each department may prescribe. In the second, third and fourth years, Intermediate Examinations will be held or not, as may be determined by each department.

Students prevented by illness from attending the Intermediate Examinations will, on presenting a medical certificate to the Dean, be given sessional standing on the results of the Final Examination.

Undergraduates and conditioned undergraduates of the first year who fail in more than three subjects at the Intermediate Examinations will be allowed to attend not more than three full courses in the second term, for each of which they must obtain the permission of the Dean.

Seventy-five per cent. of the marks given for the sessional work in each subject will be assigned to the Final Examination.

Successful students are arranged in three classes.

Mid-term examinations for first year students will be held in November. Absence from a mid-term examination will be excused only on presentation of a medical certificate. Failure to comply will mean loss of the year.

First Class General Standing at Graduation.—For an Ordinary B.A. degree of the first class, a candidate shall obtain first class standing in at least four of the eight subjects taken in the third and fourth years and not lower than second class in the remainder.

SUPPLEMENTAL EXAMINATIONS.

Examinations supplemental to final examinations are held in the month of September simultaneously with the matriculation examination. The date of the supplemental examinations will be fixed by the Faculty, and no examination will be granted at any other time, except by special permission of the Faculty, and on payment of a fee of five dollars.

ADVANCEMENT FROM YEAR TO YEAR.

Advancement to the Second Year.—A student may proceed to the second year with any one full course of the first year (or its equivalent) unpassed.

Advancement to the Third Year.—A student may proceed to the third year with any one full course (or its equivalent) unpassed, unless that full course (or any part of it) belongs to the first year.

Advancement to the Fourth Year.—A student may proceed to the fourth year with any one full course (or its equivalent) unpassed, unless that full course (or its equivalent) is compulsory in the second year.

Repeating a Year.—By special permission of the Faculty, a student who is required to repeat a year may, on application:

(a) Be exempted from attending lectures and passing examinations in the subjects in which he has already passed;

(b) Be permitted to take, in addition to the subjects in which he has failed, one of the subjects of the following year in his course.

N.B.—The choice of subjects must involve no conflict of hours as printed in the time-table.

DOUBLE COURSES.

ARTS AND APPLIED SCIENCE.

Candidates for the degree of B.A. and B.Sc. (Applied Science) in six years will take the first three years in Arts only, before attending any regular courses in Applied Science, except the *Summer Courses*. They will then enter the Faculty of Applied Science and devote the remaining three years entirely to the work of that Faculty.

The summer courses (see page 169) are necessary in order to overtake the work in descriptive geometry, drawing and shopwork, which form part of the regular curriculum of the first year in Applied Science. These summer courses must be taken for two periods of one month each (in successive Septembers), after the completion of the regular session of the first and second years in the Faculty of Arts, respectively, and must not be taken during the regular session in any of the three years assigned to that Faculty.

Students who intend to take the double course in Arts and Applied Science must notify the Dean of the Faculty of Applied Science to that effect at or before the close of their first year in Arts (May 1st), and must, before the first of September following, pay the fee of $50.00 to the Bursar, for the first of their summer courses.

The requirements of each of the three years in the Faculty of Arts are as follows:—

First Year.

The curriculum as laid down for the B.A. degree, except that a modern language must be taken. It is recommended that mathematics 2 be taken instead of mathematics 1.

Second Year.

English 3.

French 3 *or* **German 4.**

German 4, *or* **French 3,** *or* **English 4,** *or* **Economics and Political Science 1, and History 2,** *or* **Philosophy, any two of:—1, 2 and 3.**

Latin 2, *or* **Greek 3** *or* **4.**

Mathematics 3 and 5 and 6 (students who have taken 2 may substitute 4 for 3).

Third Year.

Physics 2.

Any three of the following:—

English, any two of 5, 7, 9, 10; Latin 3; French 5; German 5; Philosophy 4 *or* **7** *or* **11 or any two of 6, 8, 12, 13, 14; History 3** *or* **7 and 11; Economics and Political Science 2, 3.**

The degree of B.A. will be conferred on double course students in Arts and Applied Science on the completion of the prescribed curriculum in Arts and the requirements of the second year in Applied Science.

ARTS AND MEDICINE.

There are two double courses in the Faculties of Arts and Medicine, leading to the degrees of B.A., M.D., and B.A., D.D.S., respectively.

I. B.A., M.D.

The degrees of B.A. and M.D. may be obtained in seven years, of which the first two shall be taken in the Faculty of Arts, and the

remaining five in the Faculty of Medicine. The course in Arts is as follows:—

First Year.

English 1 and 2.
History 1.
Mathematics 1 *or* **2.**
Latin 1 *or* **Greek 1** *or* **2.**
Any two additional languages.

Second Year.

English Composition 3.
Latin 2.
Any three of the following:
Economics and Political Science 1, and History 2.
English 4.
French 3.
German 4.
Hebrew 1.
Greek 3 *or* **4** *or* **Latin 2.**
Philosophy, any two of:—1, 2, 3.
Mathematics 3.

In the double course for the degrees of B.A., M.D., the degree of B.A. will be conferred on the completion of the above curriculum in Arts and of the second year in Medicine.

For the requirements of the B.Sc. course for students proceeding to the Faculty of Medicine, see page 109.

II. B.A., D.D.S.

The degrees of B.A. and D.D.S. may be obtained in six years, of which the first two shall be taken in the Faculty of Arts and the remaining four in the Department of Dentistry in the Faculty of Medicine. The course in Arts is the same as that prescribed for the double course of B.A., M.D. (see I, above).

B. COM. AND B.A.

Particulars regarding this course can be obtained from the Dean of the Faculty of Arts.

ARTS AND THEOLOGY.

Students who are pursuing a double course in Arts and Divinity (six years at least) will take in the third and fourth years the courses which constitute the ordinary curriculum in Arts, less a half course in each of these years, or a whole course in either.

COURSES OF LECTURES IN ARTS.

The hours of the ordinary lectures only are indicated; the hours for honour lectures will be arranged by the several departments at the opening of the session.

DEPARTMENT OF BOTANY.

PROFESSOR:—FRANCIS ERNEST LLOYD.
PROFESSOR OF MORPHOLOGICAL BOTANY:—CARRIE M. DERICK.

1. **General Biology.**
   As in first year Medicine.....Professor Lloyd, Dr. Jackson.

2. **Elements of Botany.**
   2 hrs. 2nd term; Mon., Wed., at 10...
   Professsor Lloyd or Professor Derick.
   4 hrs. lab.; Sat., 9 to 1.
   Prerequisite for all courses except 3, and also with Zoology for Honours in Biology.

3. **Classification of the Pteridophyta and Spermatophyta.**
   Eight lectures (optional). 2nd Term (Mar.-Apr.)...
   Professor Lloyd.

4. **Comparative Plant Morphology.**
   2 hrs. sess.; Tu., Fri., at 10.....Professor Derick.
   6 hrs. lab.

5. **Variation, Heredity and Evolution.**
   2 hrs. sess.....Professor Derick.

6. **Histology and Anatomy.**
   2 hrs. sess.....Professor Lloyd.
   4 hrs. lab.

7. **Elementary Plant Physiology.**
   2 hrs. sess.....Professor Lloyd.
   6 hrs. lab.

8. **Algae of Water-Supplies; Plant Pathology.**
   2 hrs. sess.....Professor Derick.
   6 hrs. lab.

HONOUR COURSE IN BIOLOGY.

Prerequisites: Botany 2, Chemistry 1, Zoology 2.
Third Year: Botany 4 and 6; Zoology 3 and 4.
Fourth Year: Botany 7 and 8; Zoology 5 and 6.

GRADUATE COURSE.

Prerequisites: Botany 2 to 8; Chemistry 1; Zoology 2; or equivalent courses taken elsewhere.

DEPARTMENT OF CHEMISTRY.

PROFESSOR:—R. F. RUTTAN.

ASSOCIATE PROFESSORS:— N. N. EVANS. F. M. G. JOHNSON. V. J. HARDING.

ASSISTANT PROFESSORS:— V. K. KRIEBLE. F. W. SKIRROW.

LECTURERS:— A. R. MACLEAN. OTTO MAASS.

DEMONSTRATORS:— G. S. WHITBY. E. G. YOUNG. O. W. HERZBERG. JOHN RUSSELL. W. A. WIELAND.

(Unless otherwise specified, all lectures and laboratory courses are given in the Chemistry Building.)

1. General Chemistry.

3 hrs. sess.; Mon., Tu., Th., at 2...
Professors Ruttan and Skirrow.

4 hrs. lab., Mon., Thu., 3 to 5...
Dr. A. R. MacLean and O. W. Herzberg.

Text-books:—Alex. Smith, General Chemistry for Colleges, new edition.

2. Organic Chemistry.

3 hrs. 1st term; Mon., Wed., Fri., at 3...Professor Ruttan (Old Medical Building).

2 hrs. 2nd term; Tu., at 10, Th., at 12. Assistant Professor Krieble.

6 hrs. lab., 2nd term.....Dr. A. R. MacLean and Mr. Whitby.

Text-books:—Remsen or Perkin and Kipping.

3. Analytical Chemistry.

(a) QUALITATIVE ANALYSIS.

1 hr. 1st term; 9 hrs. lab.....Professor Evans and Mr. Herzberg.

Text-book:—Steiglitz, Qualitative Analysis.

(b) QUANTITATIVE ANALYSIS.

1 hr. 2nd term; 12 hrs. lab....
Assistant Professor Skirrow and Mr. Russell.

Text-book:—Cumming and Kay, Quantitative Analysis.

4. Elementary Physical Chemistry.

2 hrs. 1st term; Tu., at 10, Th., at 12...
Professor Johnson and Mr. Maass.

Text-book:—Walker, Introduction to Physical Chemistry.

5. Organic Chemistry (Advanced).

2 hrs. sess.; Tu., at 9, Fri., at 11....
Professor Ruttan and Professor V. J. Harding.
12 hrs. lab.....
Professor Ruttan, Assistant Professor Krieble and Dr. MacLean.

6. Inorganic Chemistry (Advanced).

2 hrs. sess.; Wed. and Fri., at 10....Assistant Professor Skirrow.

7. Physical Chemistry (Advanced).

2 hrs. sess.; Wed. and Fri., at 9....
Professor Johnson and Mr. Maass.
6 hrs. lab.; Mon. and Wed., 2 to 5.

8. Quantitative Analysis (Advanced).

1 hr. sess.....Assistant Professor Skirrow and Mr. Russell.
12 hrs. lab.

9. Historical Chemistry.

1 hr., 2nd term.....Professor Johnson and Mr. Maass.

10. Biological Chemistry.

3 hrs. sess., 2nd term; Mon., Wed., and Fri., at 3....
(Old Medical Building.) Professor Ruttan.
6 hrs. lab., 2nd term; Wed. and Sat., 9 to 12....
(Old Medical Building.)
Professor Ruttan, Professor Harding and Mr. Young.
Text-book:—Hawk's Practical Physiological Chemistry.

11. Biological Chemistry (Advanced).

5 hrs. lab., 2nd term.....
(Old Medical Building.)
Professor Ruttan and Professor V. J. Harding.

12. Electro-Chemistry.

2 hrs., 1st term; Mon., at 9, Fri., at 12....
Dr. Johnson and Mr. Maass.

13. Food Chemistry.

1 hr., 2nd term; Tu., at 11.....Dr. Ruttan.

14. Industrial Inorganic Chemistry.

2 hrs., 1st term; Wed. and Fri., at 11.....Prof. Evans

15. Industrial Organic Chemistry.

2 hrs., 2nd term; Wed. and Fri., at 11.....Dr. Ruttan.

HONOUR COURSE IN CHEMISTRY.

Prerequisites: 1.

Third Year: 2, 3, 4; Physics 2; and a half-course in calculus or biology or geology or mineralogy or scientific German.

Fourth Year: (a) 5, 7, 9, 10 (11 optional), or, (b) 6, 7, 8, 9; Physics 3.

HONOUR COURSE IN CHEMISTRY AND BIOLOGY.

Second Year: Latin 2; English 3; Chemistry 1; Botany 2; Zoology 2; and either French 3, or German 4. *Third Year*: Either Physics 2 or French 5 or German 5 and Chemistry 2, 3 (a) and 10; Zoology 3; Botany 4 and 7. *Fourth Year*: A full course in physics or biology or advanced chemistry and Chemistry 3 (b), 11; Zoology 5 and 6; Botany 6.

DEPARTMENT OF CLASSICS.

PROFESSORS:— THE PRINCIPAL. JOHN MACNAUGHTON. S. B. SLACK.

ASSOCIATE PROFESSOR:—H. J. ROSE. (Absent on military service.)

LECTURER:—A. M. THOMPSON.

SESSIONAL LECTURER AND TUTOR (ROYAL VICTORIA COLLEGE):—
ELIZABETH A. IRWIN.

Greek.

All students taking Greek are expected to provide themselves with a grammar, a Greek-English dictionary, a classical dictionary, and an Atlas of ancient geography. The following are recommended:—An Elementary Greek Grammar, Bryant and Lake (Oxford Univ. Press); *or* Goodwin's Greek Grammar (Ginn & Co.); Liddell and Scott's Greek Lexicon (abridged, or intermediate); Classical Atlas (Everyman Series, Dent); Smith's Smaller Classical Dictionary (Everyman Series, Dent).

1. Beginners' Greek.

4 hrs. sess.; Mon., Tu., Th., Fri., at 3.....Prof. Slack

Text-books:—White's First Greek Book (Ginn & Co.); Passages for Greek Translation (Peacock & Bell, Macmillan). Students who take the Beginners' Greek Course will be required to attend a continuation class during May and June, unless specially exempted.

2. Ordinary Greek.

4 hrs. sess.; Mon., Tu., Th., and Fri., at 3.

Text-books:—Cebetis Tabula (Jerram, Clarendon Press); Euripides, Heraclidae (Jerram, Oxford Univ. Press). *Composition*:—Greek

Exercises, Bryant and Lake (Oxford Univ. Press) and Elementary Greek Grammar, Bryant and Lake (Oxford Univ. Press). *Translation at sight*:—Greek Unseens (Intermediate, Cloth, Blackie).

3. Greek.

4 hrs. sess.; Mon., Tu., Th., Fri., at 4.....Mrs. Irwin.

Summer reading:—Greek History for Schools, Edmonds, pp. 140-217 (Camb. Univ. Press).

Text-books:—Greek Reader for Schools, Freeman and Lowe, pp. 1-45 (Oxford Univ. Press). *Composition*:—As in 2. *Translation at sight*:—As in 2. Prerequisite:—1.

4. Greek.

4 hrs. sess.; Mon., Tu., Th., Fri., at 4.....Dr. Thompson.

Summer reading:—As in 3. *Texts*:—Plato, Apology; Euripides, Alcestis. *Composition*:—North and Hillard, Greek Prose Composition (Rivingtons). *Translation at sight*:—Greek Unseens (Seniors, Cloth, Blackie).

5. For the Session 1919-20. This course will be announced next year. The standard will be similar to that of No. 6.

6. Greek Language and Literature.

4 hrs. sess.; Mon., Tu., Wed., Fri., at 11.....Professor Slack.

Summer reading:—Greek History for Schools, Edmonds, p. 217 to end (Camb. Univ. Press).

Texts:—Callimachus, Hymns; Theocritus (in Bucolici Græci, Oxf. Classical Texts); Select Fragments of Greek Comic Poets, Pickard-Cambridge, pp. 104-154 (Oxford Univ. Press). *Composition*:—As in 4; also Sidgwick, Introduction to Greek Prose Composition (Longmans). *Translation at sight*:—Florilegium Tironis Græcum (Macmillan & Co.). *Literature*:—A course of twelve lectures on some period of Greek history or literature or on some aspect of Greek life or thought.

7. For the Session 1919-1920. To be announced next year.

8. Greek.

4 hrs. sess.....Professor Macnaughton and Professor Slack.

Summer reading:—Third and Fourth Years: Isocrates, Panegyricus, Sandys; Fourth Year only: Euripides Iphigenia in Tauris (Jerram, Oxford Univ. Press); Euripides Orestes, Wedd (Camb. Univ. Press). *Texts*:—Aeschylus, Agamemnon; Plato, Protagoras. *Composition*:—Mackie, Parallel Passages (Macmillan & Co.). *Translation at sight*:—Models and Exercises in Unseen Translation, Fox and Bromley (Clarendon Press).

HONOUR COURSE.

Prerequisites:—Greek 1 and 3, or 2 and 4. Third and Fourth Years: Greek 6 and 8.

Latin.

All students taking Latin are expected to provide themselves with a grammar, a Latin-English Dictionary, a classical Dictionary, and an Atlas of Ancient Geography. The following are recommended:—Sonnenschein, New Latin Grammar (Clarendon Press, 1912; N.B.—Note the exact title); Lewis, School Dictionary, *or* White, Junior Students' Latin-English Dictionary; "Everyman" Classical Atlas (Dent.); Smith, Smaller Classical Dictionary ("Everyman" Series, Dent).

1. Latin.

4 hrs. sess.; Mon., Wed., Th., Fri., at 10 (Men).
4 hrs. sess.; Mon. Tu., Wed., Fri., at 11 (Women, R.V.C.).
Professor Macnaughton and Dr. Thompson.

Text-books:—Virgil Eclogues, omitting 2 and 3 (Virgil, Bucolics by Jerram, Oxford Univ. Press); Extracts from Cicero, Walford, pp. 3-31 (Oxford Univ. Press). *Composition*:—Latin Composition, Writing of Narrative Latin by B. W. Mitchell (American Book Co.). *Translation at sight*:—Jerram, Anglice Reddenda, First Series (Clarendon Press). *Grammar*:—Sonnenschein, New Latin Grammar (Clarendon Press, 1912. N.B.—Note the exact title), pages 178-211.

Advanced Class:—See 7.

2. Latin.

4 hrs. sess.; Mon., Tu., Th., Fri., at 12 (Men); Mon., Tu., Th., Fri., 12 (Women, R.V.C.).
Professors Macnaughton and Slack and Dr. Thompson.

Texts:—Livy XXI; Horace, Epistles I. *Composition*:—Latin Prose Composition, Vol. I, Pt. II. (G. G. Ramsay, Oxford Univ. Press). *Translation at sight*:—Latin Translation for Public School Scholarships (Dalton, Macmillan). *Grammar*:—Sonnenschein, New Latin Grammar (Clarendon Press, 1912. N.B.—Note the exact title), pages 123-178.

Advanced class:—See 7.

3. For the Session 1919-1920. To be announced next year. The standard will be similar to that of 4.

4. Latin Language, Literature and History.

4 hrs. sess.; Mon., Wed., Th., Fri., at 10.....Professor Slack.

Summer reading:—Roman Empire, Jones (Story of the Nation Series). *Lectures*:—Texts: Tacitus, Histories III (Summers, Camb.

Univ. Press); Horace, Odes II; Livy, III (P. T. Jones, Oxford Univ. Press). *Composition*:—Continuous Latin Prose, Dakers (Rivingtons). *Translation at sight*:—Rivingtons Class Books of Latin Unseens, Book X. *Literature*:—A course of twelve lectures on Roman history, antiquities, literature or religion.

5. For the Session 1919-1920. Subjects to be announced next year.

6. **Latin.**

4 hrs. sess.....Dr. Thompson.

Private readings during the session:—Third and Fourth Years: Terence, Phormio. Fourth year only: Livy, Book I (Edwards, Camb. Univ. Press). *Texts*:—Martial, Select Epigrams VII-XII (Bridge & Lake, Oxford Univ. Press); Juvenal, Satires (Duff, Camb. Univ. Press). *Composition*:—Nixon, Prose Extracts for Translation into English and Latin (Macmillan). *Translation at sight*:—Fox and Bromley, Models and Exercises in Unseen Translation (Clarendon Press).

7. At the beginning of the second term, if not before, an Advanced Class will be formed to prepare for Second Year Exhibitions and Third Year Scholarships. This class will be open to qualified students of the first two years. Professor Slack.

HONOUR COURSE.

Prerequisites:—Latin 1 and 2.

Third and Fourth Years:—Latin 4 and 6.

Comparative Philology.

1. **Introductory Course.**

2 hrs. 1st term.....Professor Slack.

2. **Latin and Greek Historical Grammar.**

2 hrs., 2nd term.....Professor Slack.

DEPARTMENT OF ECONOMICS AND POLITICAL SCIENCE.

PROFESSOR:—STEPHEN B. LEACOCK.
ASSOCIATE PROFESSOR:—J. C. HEMMEON.

1. **Elements of Political Economy.**
2 hrs. sess.; Mon., Fri., at 11.....Professor Leacock.

2. **Principles of Economic Theory.**
4 hrs. sess.; Mon., Tu., Wed., Fri., at 11....Professor Hemmeon.

3. **Principles of Political Science.**
4 hrs. sess.; Mon., Tu., Th., Fri., at 2.....Professor Leacock.

4. **Labour Problems.**
4 hrs. 1st term.....Professor Hemmeon.

5. **Money and Banking.**
4 hrs. 2nd term.....Professor Leacock.

6. **Political Economy Prior to the Nineteenth Century.**
4 hrs. 1st term.....Professor Hemmeon.
(Given in 1920-21.)

7. **Political Economy in the Nineteenth Century.**
4 hrs. 2nd term.....Professor Leacock.
(Given in 1920-21.)

8. **Economic Factors in the Development of Society.**
4 hrs. 1st term.....Professor Hemmeon.
(Given in 1919-20.)

9. **Social Reform.**
4 hrs. 2nd term.....Professor Leacock.
(Given in 1919-20.)

10. **Canada:—Federal and Provincial Governments.**
4 hrs. 1st term.....Professor Leacock.

11. **Public Finance.**
4 hrs. 2nd term.....Professor Hemmeon.

12. **Canada:—Industrial and Economic Problems.**
2 hrs. sess.; Mon., Wed., at 10.....Professor Hemmeon.

HONOUR COURSE.

Prerequisite: No. 1. *Third Year*: Nos. 2 and 3, together with 4 and 5, or 6 and 7, or 8 and 9 (according to the year), and one approved course in History or French or Philosophy. *Fourth Year*: Nos. 4 and 5, or 6 and 7, or 8 and 9 (according to the year), and Nos. 10, 11, 12 and one half-course (approved) in History or French or Philosophy or Roman Law.

GRADUATE COURSE FOR M.A. DEGREE.

Prerequisites: Nos. 2, 3, 4 and 5; or 6 and 7; or 8 and 9; 10, 11, or equivalent courses taken elsewhere. Resident study, one year, with at least eight lectures a week selected from any courses among Nos. 4 to 12 (inclusive), not already taken, and any special course offered from time to time, or any course approved by the department, together with a thesis. Non-resident study: At least two years' work covering the same ground as above, with examinations, and a thesis.

EXHIBITIONS.

For exhibitions, see page 77.

DEPARTMENT OF EDUCATION.

PROFESSOR:—J. A. DALE.
ASSOCIATE PROFESSOR AND HEAD OF THE SCHOOL FOR TEACHERS, MACDONALD COLLEGE:—SINCLAIR LAIRD.

(For the staff of the School for Teachers, see Officers of Instruction.)

1. **Theory and Practice of Education.**

2 hrs. sess.....Professor Dale.

A. First Term,
   (a) General Theory; Mon., at 5.
   (b) Modern History; Th., at 5.

B. Second Term,
   Contemporary Problems, Mon., Th., at 5.

2. **History of Education:—Ancient and Medieval.**

2 hrs. sess.; Wed., Fri., at 5.....Professor Dale.

1 and 2 are required for the First Class Academy Diploma of the Province of Quebec, together with (a) fifty half-days of observation and practice, which can be taken partly in term time, and may be divided between the years; (b) a course in physical education qualifying for the Strathcona certificate B. This course is taken in the fourth year, before Christmas See page 296.

GRADUATE COURSE.

3. Readings, Reports, Theses.

Professors Dale and Laird.

TRAINING OF TEACHERS.

The University, through its Department of Education, undertakes the training of teachers in all grades required by the Province; and through the Teachers Training Committee offers training for specialists in certain subjects. See page 148.

DEPARTMENT OF ENGLISH.

PROFESSOR:—CHAS. E. MOYSE.

PROFESSOR OF COMPARATIVE LITERATURE AND ASSOCIATE PROFESSOR OF ENGLISH:—P. T. LAFLEUR.

ASSISTANT PROFESSORS:— CYRUS MACMILLAN. (On military service overseas.) SUSAN E. CAMERON.

LECTURER:—G. W. LATHAM.

1. English Composition.

1 hr. sess.; Mon., at 12 (Men); Tu., at 9 (Women, R.V.C.).....Mr. Latham.
Required of all first year undergraduates.

2. English Literature: General Course.

2 hrs. sess.; Tu., Th., at 12 (Men).....Professor Moyse.
Mon., Wed., at 9 (Women, R.V.C.)..Assistant Professor Cameron.
Required of all first year undergraduates.

3. English Composition.

1 hr. sess.; Tu., at 3 (Men).....Mr. Latham.
Tu., at 3 (Women, R.V.C.).....Asst. Professor Cameron.
Required of all second year undergraduates.

4. English Prose From Bacon to Stevenson.

3 hrs. sess.; Mon., Th., Fri., at 3.....Professor Lafleur.
Assistant Professor Cameron and Mr. Latham.

5. Pre-Shaksperian Drama and Shakespere.

2 hrs. sess.; Mon., Th., at 4.....Professor Moyse.

6. Shakespere (Five Plays).

2 hrs. sess.; Tu., Th., at 11.....Asst. Professor Macmillan.
(Omitted in 1918-19.)

7. **Poetry and the Drama From Dryden to Moore.**
2 hrs. sess.; Tu., Th., at 10.....Professor Lafleur.

8. **Argumentation and Debating.**
2 hrs. sess.....Mr. Latham and Asst. Professor Macmillan.
(Omitted in 1918-19.)

9. **Poets of the Nineteenth Century.**
2 hrs. sess.; Tu., Friday., at 4....
Professor Lafleur and Assistant Professor Cameron.

10. **The History of English Prose Fiction From Defoe to George Eliot.**
2 hrs. sess.; Mon., Fri., at 11.....Professor Lafleur.

11. **The Drama in England From 1590 to 1642.**
2 hrs. sess.; Mon., Wed., at 12.....Assistant Professor Macmillan.
(Omitted in 1918-19.)

12. **Methods of Literary Criticism.**
2 hrs. sess.; Wed., Th., at 11.....Professor Lafleur.

13. **Anglo-Saxon.**
2 hrs. sess.....Mr. Latham.
Text-book:—Sweet, Anglo-Saxon Reader (all the prose).

14. **Anglo-Saxon Poetry and Introduction to Germanic Philology.**
2 hrs. sess.....Professor Moyse.
Text-books:—Sweet, Anglo-Saxon Reader (all the verse); Wright, Old English Grammar (second edition); Wright, Primer of the Gothic Language.
Prerequisite:—13.

15. **Chaucer.**
1 hr. sess.....Mr. Latham.

16. **Prose Writers Before Dryden.**
2 hrs. session.....Assistant Professor Cameron.

17. **Spenser and Milton.**
2 hrs. session.....Assistant Professor Cameron.

18. Comparative Literature.

The influence of Englisl literature upon the continent of Europe, chiefly during the 18th and 19th centuries.

2 hrs. sess.....Professor Lafleur.

(Given in 1919-20.)

19. Comparative Methods in Literary Study.

The literary relations between the continent of Europe and England through the works of leading French, German, Spanish, and Italian writers, beginning with Montaigne.

2 hrs. sess.; Mon., Fri., at 10.....Professor Lafleur.

20. Prose From Dryden to Burke.

1 hr. sess.....Professor Lafleur.

21. American and Canadian Literature.

2 hrs. sess.....Assistant Professor Cameron.

(Given in 1919-20.)

22. Tennyson and Later Victorian Poets.

2 hrs. sess.....Professor Moyse.

HONOUR COURSE.

Prerequisite:—4.

Third Year:—5, 7, 13, 15, 16, 17, 19, 20, 22.

Fourth Year:—9, 10, 12, 14, 15, 16, 17, 19, 20, 22.

English requirements for the honour courses in English and Latin, English and French, and English and German:—

Third Year:—13, and three courses (aggregating six hours) chosen from 5 to 22.

Fourth Year:—14, and three courses (aggregating six hours) chosen from 5 to 22, not taken in the third year.

English requirements for the honour courses in English and History, English and Philosophy:—

Third Year:—Any courses aggregating eight hours chosen from 5 to 22.

Fourth Year:—Any courses aggregating eight hours chosen from 5 to 22, not taken in the third year.

GRADUATE COURSES.

23. Anglo-Saxon.

Beowulf.

2 hrs. sess.....Professor Moyse.

24. Germanic Philology.

2 hrs. sess.....Professor Moyse.

25. Comparative Literature.

Epistolary Literature.

2 hrs. sess.....Professor Lafleur.

26. Comparative Literature.

Memoirs and Memoir-Writers beginning with Philippe de Commines.

2 hrs. sess.....Professor Lafleur.

27. Chaucer.

2 hrs. sess.....Mr. Latham.

Prerequisite:—15.

28. Drama in England From 1642 to 1900.

2 hrs. sess.....Assistant Professor Macmillan.

(Omitted in 1918-19.)

Candidates for M.A. in English must take twelve hours of lectures a week, six of which shall be selected from "Graduate Courses." The remainder may be selected from 5 to 22, inclusive, if not already taken. 13 is compulsory.

Candidates for M.A. with English as a major subject must take eight hours of lectures a week, four of which must be selected from "Graduate Courses." Course 13 or its equivalent is compulsory.

Candidates for M.A. with English as a minor subject must take four hours of lectures a week, exclusive of 1 to 4.

DEPARTMENT OF GEOLOGY AND MINERALOGY.

PROFESSORS:— { FRANK D. ADAMS. / J. AUSTEN BANCROFT.

ASSISTANT PROFESSOR OF MINERALOGY:—RICHARD P. D. GRAHAM.

LECTURER:—J. STANSFIELD.

SESSIONAL LECTURER:—JOHN A. DRESSER.

1. General Geology.

3 hrs. sess.; Mon., Wed., Fri., at 9....

Professors Adams and Bancroft.

Weekly excursions on Saturday morning while the season permits. On their discontinuance, 2 hrs. lab., Sat., at 10.

Text-book:—Scott, Introduction to Geology.

2. Physiography.

2 hrs. sess. Hours to be arranged.....Professor Bancroft.

Prerequisite:—1.

3. **Canadian Geology.**
1 hr., 1st term. Wed., at 11.....Professor Bancroft.
Prerequisite:—1.

4. **Historical Geology (Advanced).**
1 hr. sess. (hour to be arranged); 2 hrs. lab.,
2nd term.....Mr. Stansfield.
Prerequisite:—1.

5. **Mineralogy.**
2 hrs. sess.; Tu., Th., at 9.....Assistant Professor Graham.

6. **Determinative Mineralogy.**
2 lab. periods of 3 hrs. each during the first term;
Th., Fri., at 2....
Assistant Professor Graham and Mr. Stansfield.

7. **Ore Deposits.**
4 hrs., 2nd term; Tu., at 10; Wed., Th., at 11....
Professor Adams.

8. **Economic Geology.**
1 hr., 1st term; Th., at 11.....Professor Bancroft.

9. **Mineralogy.**
2 lab. periods, 1st term, 3 hrs. each.
Hours to be arranged.....Assistant Professor Graham.

10. **Petrography.**
1 hr., 1st term; Tu., at 10; 1 lab. (3 hrs.) sess.....
Professor Bancroft, Assistant Professor Graham and Mr. Stansfield.

11. **Palaeontology.**
1 hr. 1st term; 1 lab. (3 hrs.), 1st term.
All hours to be arranged.....Mr. Stansfield.

12. **Geological Colloquium.**
One evening in alternate weeks (to be arranged)....
Professor Adams, Professor Bancroft, Assistant Professor Graham and Mr. Stansfield.

13. **Geological Survey.**
Two weeks at the close of the third year, or immediately before beginning the regular course of the fourth year.

HONOUR COURSE.

Third Year:—1, 5, 6; also Zoology 2 and Chemistry 1 (if not already taken, in which case equivalent courses will be assigned).

Fourth Year:—2, 3, 4, and 7 to 13, inclusive; also Botany 2.

DEPARTMENT OF HISTORY.

PROFESSOR:—CHARLES W. COLBY. (On leave.)
ASSOCIATE PROFESSOR:—C. E. FRYER.
SESSIONAL LECTURER:—VERA L. BROWN.

1. **Great Men and Great Movements.**
2 hrs. sess.; Tu., at 10; Th., at 11 (Men); Fri., at 9; Wed., at 12 (Women, R.V.C.).....Miss V. Brown.

2. **The European States System.**
2 hrs. sess.; Tu., Wed., at 11.....Professor Fryer.

3. **History of Europe, 1519-1789.**
4 hrs. sess.; Mon., Wed., Th., Fri., at 10.....Miss V. Brown.

4. **The Renaissance.**
2 hrs. sess.....Professor Colby.
(Omitted in 1918-19.)

5. **The Political History of Europe From 1815-1878**
2 hrs. sess.....Miss V. Brown.
(Omitted in 1918-19.)

6. **Europe Since the Fall of Bismarck.**
2 hrs. sess.; Mon., Wed., at 4.....Professor Colby.
(Omitted in 1918-19.)

7. **History of Canada, 1763-1837.**
2 hrs. sess.....Professor Fryer.

8. **Historical Method and Criticism.**
Seminar, 2 hrs. sess.....Professor Fryer.

9. **The History of England Since 1784.**
4 hrs. sess.....Professor Fryer.

10. **Recent History of the Great Powers.**
2 hrs. sess.....Professor Fryer.

11. **History of European Colonisation.**
2 hrs. sess.....Miss V. Brown.

HONOUR COURSE.

Prerequisites:—1 and 2.
History requirements for the honour course in History and English (1918-19):—
Third Year:—3, 7, 11.
Fourth Year:—9, 11, 8, or 10 or Economics and Political Science 10.

GRADUATE COURSE.

Prerequisites:—1 and 2 and two full courses selected from courses 3 to 10, inclusive, or equivalent courses taken elsewhere.

LAW.

PROFESSOR:—R. W. LEE.

1. **Roman Law.**
   3 hrs. sess.; Mon., Wed., Fri., at 9.30 a.m.....Dean Lee.

2. **Legal History.**
   2 hrs. sess.

3. **Jurisprudence.**
   2 hrs. sess.

DEPARTMENT OF MATHEMATICS.

PROFESSOR:—J. HARKNESS.

ASSISTANT PROFESSORS:—T. RIDLER DAVIES. C. T. SULLIVAN. L. V. KING.

1. **Ordinary Mathematics.**
   4 hrs. sess.; Mon., Tu., Wed., Th., at 9 (Men); Mon., Tu., Th., Fri., at 12 (Women, R.V.C.).....Asst. Professor Davies.
   Plane and Solid Geometry:—2 hrs., 1st term.
   Text-book:—Hall and Stevens.
   Algebra:—2 hrs., 2nd term.
   Text-book:—Hall and Knight (omitting chaps. 40 to 42, inclusive).
   Trigonometry:—2 hrs. sess.
   Text-books:—Hall and Knight, Elementary Trigonometry (to page 210 and chap. 19); Bottomley, Logarithmic Tables.

2. **Advanced Ordinary Mathematics.**
   Geometry and trigonometry and modern pure geometry; advanced algebra, higher trigonometry and theory of equations.
   4 hrs. sess.....Professor Harkness and Asst. Professor Davies.

3. **Solid Geometry and Geometrical Conic Sections and Algebra.**
   3 hrs. sess.; Mon., Wed., Fri., at 11...Assistant Professor Davies.
   Solid Geometry:—
   Text-book:—Wilson, Solid Geometry and Geometrical Conics.
   Algebra:—Permutations and combinations; binomial theorem; exponential and logarithmic series; interest, annuities and bonds; undetermined co-efficients; partial fractions; summation of typical series; probabilities; determinants; graphic methods.
   Text-book:—Hall and Knight, Higher Algebra.

4. **Analytical Geometry and Infinitesimal Calculus.**

4 hrs. sess.; Mon., Wed., Th., Fri., at 10....
Professor Harkness and Asst. Professor Sullivan.
Advised Elective No. 5.

5. **Spherical Trigonometry.**

1 hr., 2nd term.....Assistant Professor Davies.

6. **Dynamics, Statics and Hydrostatics.**

2 hrs. sess.....Assistant Professor King.
Prerequisite:—1 or 2—preferably 2.

7. **Advanced Differential Calculus, Differential Equations and Geometry of Three Dimensions.**

4 hrs. sess.....Professor Harkness.

8. **Theory of Functions.**

3 hrs. sess.....Professor Harkness.

9. **Modern Differential Equations.**

2 hrs. sess.....Professor Harkness.

10. **Modern Analytical Geometry.**

5 hrs. sess.....Professor Harkness.
(Omitted in 1918-19.)

11. **Differential Equations of Physics.**

5 hrs. sess.....Professor Harkness.
(Omitted in 1918-19.)

12. **The Elements of Astronomy.**

2 hrs., 1st or 2nd term as may be arranged....
Prerequisites:—1 and 3. Assistant Professor Davies.

Honour Course in Mathematics and Physics.

Prerequisites:—Mathematics 2; Physics 1.
Second Year:—Mathematics 4, 5, 6; Physics 2, 4.
Third Year:—Mathematics 7, 12; Physics 3, 5, 6, 7.
Fourth Year:—Mathematics 8, 9; Physics 8, 9, 10, 11, 12, 13.

Graduate Course.

Mathematics:—8, 9. Prerequisites:—2, 3, 4, 5, 6, 7.

DEPARTMENT OF MODERN LANGUAGES.

PROFESSOR:—HERMANN WALTER.
ASSOCIATE PROFESSOR:—R. DU ROURE. (On military service overseas.)
ASSISTANT PROFESSORS:— J. L. MORIN. E. T. LAMBERT.
LECTURER IN FRENCH (ROYAL VICTORIA COLLEGE):— ————————
LECTURER IN FRENCH:—P. VILLARD.

A.—French.

Owing to the position which this University occupies in the midst of a very large French-speaking population, there is a permanent demand for courses of a practical, conversational character. The Department profits by the co-operation of French church services, French newspapers, French theatres, French literary clubs, and public lecture courses in the French language.

1. French Language.

4 hrs. sess. ...
Mon., Wed., Th., Fri., at 10 (Women, R.V.C.).
Mon., Tu., Wed., Fri., at 11 (Men).
Asst. Professor Morin, Mr. Villard.

Texts:—(1) Bouvet, French Syntax and Composition (Heath); Super, Histoire de France (Holt); J. Hathaway, Modern French Stories (A. E. Co.). (b) Daudet, Trois Contes Choisis (Heath); Erckmann-Chatrian, Le Conscrit de 1813 (Heath); Labiche, Le Voyage de M. Perrichon (Holt); Hugo, Gavroche (Oxford); Poésies Choisies.

Advanced Section, in place of course (b) Daudet, Tartarin de Tarascon (A. B. Co.); Sand, La Petite Fadette (Heath); Racine, Andromaque (Ginn); Beaumarchais, Le Barbier de Séville (Macmillan); Poéses Choisies.

2. French Science Readings.

2 hrs. sess. ..... Mr. Villard.
Text:—Bowen, A First Scientific French Reader (Heath).

3. French Language.

4 hrs. sess.; Mon., Tu., Wed., Th., at 9 (Women, R.V.C.).
Mon., Tu. Wed., Th., at 9 (Men).
Asst. Professor Morin, Mr. Villard.

Texts:—(a) Vreeland and Koren, French Syntax and Composition (Holt); Corneille, Le Cid (Heath); Vigny, Cinq-Mars (Heath); Elementary Historical French Grammar. (b) Racine, Britannicus (Holt); Molère, Les Femmes Savantes (Heath); Hugo, Quatre-vingt-treize (Ginn); Mansion, Littérature française.

Advanced section, in place of course (b):—Maître Patelin (Black, (Macmillan); Froissart, Trois Récits (Black, Macmillan); Voltaire, Zadig (Macmillan); Chauteaubriand, Atala (Heath); Musset, Deux Comédies (Oxford); Mansion, Littérature française.

Private Readings:—Vigny, Le Cachet Rouge (Oxford); Mérimée, Tamango, Mattéo, Falcone (Oxford).

4. French Commercial Course.

2 hrs. sess.....Mr. Villard.

Text:—Janau, Commercial French Correspondence (Longmans). Commercial students also take 3 (a).

5. French Literature:—General Course to the end of the Seventeenth Century.

4 hrs. sess.; Mon. Tu., Th., Fri., at 12.

Texts:—Oxford Book of French Verse; Darmsteter Morceaux Choisis du XVIIe siècle (Delagrave); Montaigne, Selections (Heath); Rabelais, Selections (Macmillan); French Prose of the XVIIth Century (Heath); Corneille, Nicomède (Macmillan); Racine, Les Plaideurs (Heath); Molière, Le Misanthrope (Oxford); Boileau, Selections (Heath); Doumic, Histoire de la Littérature française.

Prose Composition:—Spiers, Translation into French Prose (Simpkin Marshall).

6. French Literature:—General Course, Eighteenth and Nineteenth Century.

4 hrs. sess.; Mon., Tu., Th., Fri., at 12.
(Given in 1919-20.)

Texts:—Lesage, Gil Blas (Heath); Buffon, Discours sur le style; Marivaux, Le jeu de l'amour et du hasard (Macmillan), Diderot, Selections (Heath); Sedaine, Le Philosophe sans le savoir; J. J. Rousseau, Selections; Voltaire, Zaïre; Chateaubriand, Atala René (Nelson); Flaubert, Trois Contes (Nelson); Hugo, Préface de Cromwell (Oxford); Balzac, Eugénie Grandet (Nelson); Taine, Origines de la France Contemporaine (Holt); Les Maîtres de la Critique Contemporaine (Heath); Doumic, Histoire de la Littérature française.

Prose Composition:—Spiers, Graduated Course of Translation into French Prose (Simpkin, Marshall & Co., London).

N.B.—In order to be admitted to courses 5 and 6, a student must know French well enough to take lectures delivered in French and express himself in French with some fluency and correctness.

7. Mediaeval French Literature and Philology.

3 hrs. sess.....Professor Walter.
(Given in 1919-20.)

Texts:—Darmsteter's Cours de Grammaire Historique, Parts I and II, and Bartsch, Chrestomathie de l'Ancien Français.

8. Composition.

1 hr. sess.....

Nicholson and Brennan, Passages for Translation into French and German (Oxford University Press).

9. History of the French Novel.

2 hrs. sess.

10. Evolution of the French Lyric.

1 hr. sess.....
(Given in 1919-20.)

HONOUR COURSE.

Prerequisites:—1, 3.
Third and Fourth Years:—5, 6, 7, 8 (two years), 9, 10.
In order to obtain honours, candidates must be able to speak French fluently.

GRADUATE COURSE.

No resident graduate course will be offered in 1918-19.

B.—German.

1. German, Beginners' Course.

4 hrs. sess.; Mon., Tu., Th., Fri., at 2 (Women, R.V.C.); Mon., Tu., Th., Fri., at 4 (Men).....Asst. Professor Lambert.

Texts:—(a) For B.A. students, Van der Smissen und Fraser, High School German Grammar (Copp, Clark Co.); Glückauf (Ginn); Baker, German Stories (Holt). (b) For B.Sc. students, Bierwirth, Beginners German (Holt); Guerber, Märchen und Erzahlungen, vol. I (Heath); German Science Reader.

Students intending to proceed to course 4 will be required to take a supplemental examination in September (for which no fee will be charged) covering the rest of the grammar and the following texts:—Riehl, Die vierzehn Nothelfer (A. B. Co.); Moser, Der Bibliothekar (Heath); Schrakamp, Ernstes und Heiteres (A. B. Co.). Arrangements will be made by which students will be enabled to do this work by correspondence. This examination will take place at the time of the regular supplemental examinations.

2. German Language.

4 hrs. sess.; Mon., Tu., Th., Fri., at 2 (Women, R.V.C.); Mon., Tu., Th., Fri., at 4 (Men).....Asst. Professor Lambert.

Texts:—Van der Smissen und Fraser, High School German Grammar (Copp, Clark Co.); Nichols, Two German Tales (Holt); Freytag, Die Journalisten (Ginn); Fulda, Talisman (Holt); Collmann, Easy German Poetry (Ginn, Ed. 1913); Horning, German Composition.

3. German Science Reading Course.

A course in reading Science German is given for students who have matriculated in this language or have taken it in the first year. The text will be chosen to meet the requirements of the class.

4. German Language.

4 hrs. sess.; Mon., Tu., Wed., Fri., at 11 (Women, R.V.C.); Fri., at 9, Tues. at 10, Thurs. at 11, Wed. at 12 (Men)....

Assistant Professor Lambert.

Texts:—Horning, German Composition; Schiller, Wilhelm Tell (Holt); Beresford-Webb, Historical Reading Book (Holt); Goethe, Goetz von Berlichingen (Holt); Keller, Bilder aus der Deutschen Literatur (American Book Co., edition 1905).

5. German Literature (Nineteenth Century).

Prerequisite:—1 or 2, and 4.

4 hrs. sess.; Mon., Wed., Th., Fri., at 10.....Professor Walter.

Texts:—Kleist, Prinz Friedrich von Homburg (Ginn); Grillparzar, Sappho (Ginn); Hebbel, Agnes Bernauer; Heine, Prose (Oxford Univ. Press); Heine, Verse; Hauptmann, Die versunkene Glocke; Keller, Sieben Legenden; History of Literature, Nineteenth Century (Kluge).

Prose Composition:—Wiehr, German Composition (Oxford).

6. German Literature (Eighteenth Century).

(Given in 1919-20.)

Prerequisite:—1 or 2, and 4.

4 hrs. sess.; Mon., Wed., Th., Fri., at 10.....Professor Walter.

Texts:—Lessing, Emilia Galotti (Ginn); Lessing, Nathan (A. B. Co.); Goethe, Iphigenie (Pitt Press); Schiller, Wallenstein's Tod; Collins, Selections from German Classics (Oxford Univ. Press); Kluge, Geschichte der deutschen Literatur. *Prose Composition*:—Wiehr, Prose Composition (Oxford Univ. Press).

N.B.—In order to be admitted to courses 5 and 6 a student must know German well enough to take lectures delivered in German and express himself in German with some degree of fluency and correctness.

7. **Geschichte des deutschen Trauerspiels.**
3 hrs. sess.....Professor Walter.
(Given in 1919-20.)

8. **German Composition.**
1 hr. sess.....Professor Walter.
Text:—Nicholson and Brennan, Passages for Translation into French and German (Oxford Univ. Press).

9. **Mediaeval German Literature and Philology.**
3 hrs. sess.....Assistant Professor Lambert.
Texts:—Bachmann, Mittelhochdeutsches Lesebuch (Fæsi and Beer, Zurich); Behaghel, Die deutsche Sprache.

10. **Entwicklung der deutschen Lyrik.**
3 hrs. sess.....Professor Walter.
(Given in 1918-1919.)

HONOUR COURSE.

Prerequisites:—1 or 2, and 4.
Third and Fourth Years:—5, 6, 7, 8, 9, 10.
The German language alone is used in class instruction, and, in order to obtain honours, candidates must be able to speak German fluently.

GRADUATE COURSE.

No resident graduate course will be offered in 1918-19.

DEPARTMENT OF ORIENTAL (SEMITIC) LANGUAGES AND LITERATURE.

PROFESSORS:— { C. A. BRODIE BROCKWELL.
A. R. GORDON.

SESSIONAL LECTURER IN HELLENISTIC JEWISH LITERATURE:—
G. ABBOTT-SMITH.

1. **Hebrew and Semitic History.**
4 hrs. sess.; Mon., Tu., Th., Fri., at 5.....Professor Brockwell.

2. **Hebrew Readings in the Old Testament.**
4 hrs. sess.; Mon., Tu., Wed., Fri., at 11.....Professor Brockwell.
Prerequisite:—1.

3. **The Literature of the Jewish Hellenists:—Poetical Texts.**
4 hrs. sess.....Professor A. R. Gordon and Rev. Abbott-Smith.
(Given in 1919-20.)

4. **Arabic and Aramaic.**
4 hrs. sess.....Professor Brockwell.
Prerequisites:—1 and 2.

5. **Biblical and Post-Biblical Hebrew Texts.**
4 hrs. sess.....Professor Brockwell.

6. **The Literature of the Jewish Hellenists:—Prophetic Texts.**
4 hrs. sess.....Professor A. R. Gordon and Rev. Abbott-Smith.

7. **Hebrew Texts.**
4 hrs. sess.....Professors Brockwell and A. R. Gordon.

8. **History of the Greek and Roman Periods.**
1 hr. sess.....Professor A. R. Gordon.

9. **Arabic or Aramaic, or Phoenician, or Ethiopic, or Transliterated Assyrian Texts.**
3 hrs. sess.....Professor Brockwell.

10. **Semitic Archaeology, or the History of Jewish Literature (from the close of the Old Testament Canon to A.D. 1500), or The Comparative Philology of the Semitic Languages, or Semitic Myths and Social Institutions.**
3 hrs. sess.....Professor Brockwell.

HONOUR COURSE IN SEMITICS.

Prerequisite:—1.
Third Year:—7, 8, 9, 10.
Fourth Year:—The same continued.

DEPARTMENT OF PHILOSOPHY.

PROFESSOR:—W. CALDWELL.
ASSOCIATE PROFESSOR OF LOGIC AND METAPHYSICS:—
J. W. A. HICKSON.
ASSISTANT PROFESSOR OF PSYCHOLOGY:—
WILLIAM D. TAIT. (On military service overseas.)

1. **Elementary Psychology.**
2 hrs. sess.; Mon., Wed., at 10.....Asst. Professor Tait.
Text-book:—Pillsbury, Fundamentals of Psychology, 1916.

2. **Logic:—An Introductory Course.**
2 hrs. sess.; Th., Fri., at 10.....Professor Hickson.
Text-book:—Mellone, Introductory Text-book of Logic (6th ed.).

3. **Introduction to Philosophy.**
2 hrs. sess.....Professor Caldwell.

4. **Moral Philosophy.**
4 hrs. sess.; Mon., Tu., Th., Fri., at 12.....Professor Caldwell.

5. **Advanced Moral Philosophy.**
2 hrs. sess.....Professor Caldwell.

6. **Greek Philosophy.**
2 hrs. sess.....Professor Caldwell.

7. **History of Modern Philosophy.**
4 hrs. sess.
1st term: From the Renaissance to Kant.....Professor Hickson.
2nd term: From Kant to the Present Time....Professor Caldwell.

8. **The Problem of Scientific Method.**
2 hrs. sess.....Professor Hickson.

9. **Theory of Knowledge and Metaphysics.**
4 hrs. sess.....Professor Hickson.

10. **Contemporary Tendencies in Philosophy.**
2 hrs. sess.....Professor Hickson.
Prerequisite:—7.

11. **Experimental Psychology.**
4 hrs. sess.....Assistant Professor Tait.

12. **History of Psychology.**
2 hrs. sess.....Assistant Professor Tait.

13. **Applied Psychology.**
2 hrs. sess.....Assistant Professor Tait.

14. **Problems of Comparative Psychology.**
2 hrs. sess.....Professor Hickson.

15. **Philosophy of Religion.**
2 hrs. sess.....Professor Caldwell.

HONOUR COURSE.

Prerequisites:—1, 2.
Third Year:—Any three full courses from 4 to 15, inclusive.
Fourth Year:—Any three full courses from 4 to 15 other than those already selected. In addition, a course in any of the following subjects—education, history, economics, English literature, physics, physiology, zoology—is required in each of the third and fourth years.

The Philosophy requirements for honours in Philosophy and English, and Philosophy and German, are eight hours selected from 4 to 15 in each of the third and fourth years.

COURSES PRIMARILY FOR GRADUATES.

16. Psychological Laboratory.

Assistant Professor Tait.

17. Philosophical Seminary.

2 hrs. sess.....Professor Hickson.

The Critique of Pure Reason will be read and discussed. Occasional lectures will be given.

18. Ethical Seminary.

2 hrs. sess.....Professor Caldwell.

Recent and Contemporary Ethical Theories.

DEPARTMENT OF PHYSICS.

PROFESSORS:— HOWARD T. BARNES. A. S. EVE. (On military service overseas.)

ASSOCIATE PROFESSORS:— L. V. KING. A. N. SHAW.

ASSISTANT PROFESSORS:— J. A. GRAY. (On military service, overseas.) N. E. WHEELER. H. E. REILLEY.

DEMONSTRATORS:— A. A. SCOTT. VIOLET HENRY.

1. General Course.

2 hrs. sess.; Tu., Th., at 2 (Men); Tu., Th., at 3 (Women); 2 hrs. lab.....Mr. Reilley.

Text-book:—Kimball's College Physics.

2. Heat, Sound and Light.

2 hrs. sess.; Tu., Th., at 11; 2 hrs. lab.....Professor Barnes.

Text-books:—Draper's Advanced Heat; Deschanel's Sound and Light (Renouf Publishing Co.); Laboratory manuscripts (Renouf Publishing Co.).

3. Electricity and Magnetism.

2 hrs. sess.; Mon., Fri., at 10.....Mr. Wheeler.

Text-book:—Brooks and Poyser, Magnetism and Electricity (Renouf Publishing Co.); Laboratory manuscripts (Renouf Publishing Co.).

4. Heat, Sound and Light (Advanced).

2 hrs. sess.....Professor Barnes.

5. **Properties of Matter.**
2 hrs. sess.....Mr. Wheeler.

6. **Electricity and Magnetism (Advanced).**
2 hrs. sess.....Professor Barnes.

7. **Statics, Dynamics of a Particle and Rigid Dynamics.**
2 hrs. sess.....Professor King.

8. **Vector Analysis.**
2 hrs. 1st term.....Professor Eve.

9. **Elements of Hydrodynamics.**
2 hrs. sess.....Professor King.

10. **Electrical Measurements.**
1 hr. sess.; Wed., at 10; 5 hrs. lab.....Professor Barnes.

11. **Radioactivity.**
2 hrs. 2nd term.....Professor Eve.

12. **Theory of Heat.**
1 hr. sess.....Professor Barnes.

13. **Kinetic Theory of Matter.**
2 hrs. sess.....Professor King.

HONOUR COURSE IN MATHEMATICS AND PHYSICS.

Prerequisites:—Mathematics 2; Physics 1.
Second Year:—Mathematics 4, 5, 6; Physics 2, 4.
Third Year:—Mathematics 7, 12; Physics 3, 5, 6, 7.
Fourth Year:—Mathematics 8, 9; Physics 8, 9, 10, 11, 12, 13.

DEPARTMENT OF ZOOLOGY.

PROFESSOR:—ARTHUR WILLEY.
LECTURERS:— J. STAFFORD. F. S. JACKSON.

1. **Comparative Anatomy.**
As in First Year Medicine.

2. **Elementary Zoology.***
2 hrs. 1st term; Mon. and Wed., at 10.....Professor Willey.
4 hrs. lab., Sat., 9 to 1.

* Zoology 2 will not exempt from Zoology 1.

3. Zoology of Invertebrata.†

2 hrs. sess.....Mr. J. Stafford.
4 hrs. lab.

4. History of Zoology.

1 hr. sess.....Professor Willey.

5. Zoology of Vertebrata.

2 hrs. sess.....Professor Willey.
4 hrs. lab.

6. Comparative Embryology.

2 hrs., 2nd term.....Professor Willey.
4 hrs. lab.

HONOUR COURSE IN BIOLOGY.

Prerequisites:—Botany 2, Chemistry 1, Zoology 2.
Third Year:—Botany 4 and 6; Zoology 3 and 4.
Fourth Year:—Botany 7 and 8; Zoology 5 and 6.

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† This is a prerequisite for students who may hereafter wish to undertake zoological work at the Marine Laboratories under the Biological Board of Canada.

TIME TABLES OF LECTURES, 1918-19.

FACULTY OF ARTS.

HOUR.	FIRST YEAR MEN.	FIRST YEAR WOMEN.	SECOND YEAR	THIRD & FOURTH YEARS
Lectures at 9, omitting Friday.	Mathematics, 1	English, 1 and 2; (Comp., Tues., Lit., Mon. and Wed.) Hist., 1 (Fri.)	French, 3. German, 4—Men (Fri.)	Geology, 1. (Mon., Wed., Fri.)
Lectures at 10, omitting Tuesday.	German 1 (b) Latin, 1. Hist.,1 (Tues.)	French, 1.	Botany, 2 (M., W.) Zoology, 2 (M., W.) Logic, 2 and Psychol., 1; German–4, Men (Tues.)	Latin 3 and 4; History, 3; Mathematics, 4; German, 5 & 6; Botany, 4; Physics, 3 (Mon., Fri.)
Lectures at 11, omitting Thursday.	French, 1. Hist.,1 (Thur.)	Latin, 1.	Econ., 1 (M., Fri.) History, 2 (T., W.) German, 4—Women. German, 4—Men (Th.) Mathematics, 3. (M., W., Fri.)	Greek 5 & 6; Economics, 2; Hebrew, 2; English 12 (Wed., Th.); 10 (Mon., Fri.); Physics, 2 (Tu., Th.)
Lectures at 12, omitting Wednesday.	English, 1 & 2. (Comp., Mon., Lit., Tues. & Thurs.)	Mathematics, 1. Hist., 1 (Wed.)	Latin, 2. German, 4—Men (W.)	Philosophy, 4; French, 5 & 6.
Lectures at 2, omitting Wednesday.	Physics, 1. (Tu. & Thurs.)	German, 1 & 2.	Chemistry, 1 (Mon., Tues. & Thurs.)	Political Science, 3; Zoology, 3 (Tues. & Fri.)
Lectures at 3, omitting Wednesday.	Physics, 1 (B. Sc.) (Tu. & Th.) Greek, 1 & 2.	Physics, 1. (Tues. & Thur.) Physical Education. (Mon. & Fri.)	English Lit., 4 (Mon., Thurs. & Fri.) English Comp., 3 (Tues.)	Chemistry 2; Psychology, 11; Mechanics (Maths., 6) (Mon. & Thurs.) Astronomy (Math., 12).
Lectures at 4, omitting Wednesday.	German, 1(a) & 2.	Greek, 1 & 2.	Greek, 3 & 4.	Philosophy, 9. English, 9. (Tues. & Fri.) English, 5. (Mon. & Thurs.) Comp. Philology, 5. (Tues. & Thurs.) Jurisprudence (Tues. & Thurs.) Legal History. (Wed. & Fri.)
Lectures at 5, omitting Wednesday.			Hebrew, 1.	Education (1 & 2).

Laboratory periods and hours for Honour classes will be arranged at the commencement of the session.

The hours for Physical Education for women students of the second, third and fourth years will be arranged by the department.

EXAMINATION TIME TABLES.—Faculty of Arts.

EXHIBITION, SCHOLARSHIP AND SUPPLEMENTAL EXAMINATIONS, SEPTEMBER, 1918.

DATE.	Hour.	Supp. to First Year Sessional.	Second Year Exhibitions.	Supp. to Second Year Sessional.	Scholarships (Third Year.)	Supp. to Third Year Sessional.*
Wednesday....18	9.00	English. 1.	English Literature (Shakspere); History.	English, 4.	English Literature (Shakspere and Milton).	English, 5.
	2.30	English, 2.	English Literature (Macaulay and Scott.)	English 3.	English Literature (Ruskin and Arnold).	English 9 & 10
Thursday.....19	9.00	Latin, 1 (Books).	Latin Books	Latin, 2 (Books).	Latin Texts	History, 5.
	2.30	Latin, 1 (Composition, Sight Translation and Roman History).	Latin Composition, Sight Translation and Roman History.	Latin, 2 (Composition and Sight Translation).	Latin Composition, and Sight, and Roman History.	History, 7.
Friday.....20	9.00	French, 1, 2.	French Texts.	French, 3, 4.	French Books	
	2.30	History, 1.	German Texts.	Semitics, 1.	French Composition and Sight.	Geology, 1.
Monday.....23	9.00	Algebra, 1.	Geometry (Major), Geometry and Trigonometry (Minor).	Maths., 3 (Algebra).	Animal Biology. Analytical Geometry.	Education, 2.
	2.30	Geometry, 1.	French Composition and Sight.	Philosophy, 1.	German Books. Plant Biology. Logic.	Education, 1.
Tuesday.....24	9.00	Trigonometry, 1.	Greek Books, Algebra (Minor), Algebra, Tr gonometry and Theory of Equations (Major).	Greek, 3 & 4 (Books) German, 4. Philosophy, 2.	Greek Texts. Physics. Psychology.	History, 3.
	2.30	Physics, 1.	Greek Composition, Sight Translation, and History.	Greek, 3 & 4 (Composition and Sight Translation). Zoology, 2.	Chemistry, Greek Composition, Sight Translation, and History. Economics.	
Wednesday....25	9.00	Greek, 1 & 2 (Books). German (1, (a), 1, (b), 2, 3.)	German Composition and Sight.	Maths., 3 (Conics and Solid Geometry). Botany 2).	Infinitestimal Calculus. German Comp. and Sight.	Economics, 2.
	2.30	Greek, 1 & 2 (Composition and Sight).	Physics.	Chemistry, 1. History, 2. Economics, 1.	Economics. Modern History and English Composition. Philosophy (Berkeley)	Economics, 3.

* Periods for other subjects to be arranged at the time of the Examination.

EXAMINATION TIME TABLES.

FACULTY OF ARTS.

FIRST TERM EXAMINATIONS, 1919.

Morning examinations commence at 9; afternoon examinations at 2.30.

	FIRST YEAR	SECOND YEAR	THIRD & FOURTH YEARS.
Monday, January 13, 1919—			
9–11 A.M.	*Geometry, 1.	French, 3.	Geology, 1.
1–3 P.M.	Greek, 1 and 2. Physics, 1 (B.Sc.)	English, 4.	Chemistry, 2. Philosophy, 11. Mechanics, 6.
4–6 P.M.	English, 1 and 2.	Latin, 2.	Philosophy, 4. French, 5 & 6.
Tuesday, January 14th—			
9–11 A.M.	Latin, 1.	Philosophy 1, 2, 3. *Zoology, 2.	History, 3; Maths., 4; German, 5 and 6; Botany, 4; Physics, 3; Latin, 3 and 4.
1–3 P.M.	German, 1 & 2.	Greek, 3 and 4.	Philosophy, 9. English, 5 and 9.
4–6 P.M.	History, 1.	German, 4.	Astronomy.
Wednesday, January 15th—			
9–11 A.M.	French, 1.	Economics, 1. *Mathematics 3.	Economics, 2; Greek, 5 and 6; Hebrew, 2; English, 12 and 10; Physics, 2.
1–3 P.M.	Physics, 1 (B.A.)	Hebrew, 1. Chemistry, 1.	Political Science, 3; Zoology, 3.
4–6 P.M.	Trigonometry, 1	History, 2	Education, 1 and 2.

* Final Examination, 9–12 A.M.

EXAMINATION TIME TABLES.

FACULTY OF ARTS

SESSIONAL EXAMINATIONS, 1919.

Morning examinations commence at 9; afternoon examinations at 2.30.

DAY AND DATE.		FIRST YEAR.	SECOND YEAR.	THIRD AND FOURTH YEARS.
Wednesday, April 16th,	A.M.	Physics, 1.	Hebrew, 1.	Education, 1.
"	P.M.		Hebrew, 1 Maths., 5.	Education, 2.
Thursday, April 17th,	A.M.	Algebra, 1.	French, 3 and 4.	Geology, 1.
	P.M.	History, 1.	French, 3.	Geology, 1.
Friday, April 18th,	A.M.	Latin, 1.	Logic, 2.	Hist., 3; Math., 4; German, 5 and 6; Latin, 3 and 4; Botany, 4; Physics, 3.
"	P.M.	Latin, 1.	Botany, 2.	Hist., 3; Math, 4; German, 5 & 6; Botany, 4; Physics, 2.
Monday, April 21st,	A.M.	French, 1 and 2.	Economics, 1; Algebra, 3.	Econ.,2; Greek, 5 & 6; Chem., 2; Hebrew, 2; Physics, 2; English, 10.
"	P.M.	French, 1.	History, 2.	Econ., 2;Greek, 5 & 6 ; Hebrew, 2; Chem., 2; Eng., 7.
Tuesday, April 22nd,	A.M.	English, 1.	Latin, 2.	Philosophy, 4; French, 5 and 6.
"	P.M.	English, 2.	Latin, 2.	Philosophy, 4; French, 5 and 6.
Wednesday, April 23rd,	A.M.		Chemistry, 1.	Political Science, 3; Zoology, 3.
"	P.M.	Trigonometry, 1.	Chemistry, 1.	Political Science, 3; Zoology, 3.
Thursday, April 24th,	A.M.	Greek, 1 and 2.	English, 4.	Chemistry, 2; Psychology, 11; Mechanics, 6.
"	P.M.	Greek, 1 and 2.	English, 3.	Pyschology, 11.
Friday, April 25th,	A.M.	German, 1 and 2.	Greek, 3 and 4.	Philosophy, 9; English, 9; Comparative Philology.
"	P.M.	German, 1 and 2.	Greek, 3 and 4.	Philosophy, 9; English, 5; Comparative Philology.
Saturday, April 26th,	A.M.		German, 4.	
"	P.M.		German, 4.	

DEPARTMENT OF SOCIAL STUDY AND TRAINING.

Following the example of other representative universities, on both sides of the Atlantic, there has just been instituted at McGill a department of Social Service under the direction, in association with the Faculty of Arts, of Mr. J. Howard T. Falk, who has conducted practical work of the same kind for several years in Winnipeg. The affiliated theological colleges of the University have been among the foremost in recognizing the need for such training, and their Joint Board has generously co-operated with the McGill Governors in providing the funds necessary to secure the services of a Director.

The details of the courses to be offered cannot be finally adjusted until Mr. Falk arrives in Montreal, but it may be enough to state in the meantime that, in addition to lectures in the regular departments of the Faculty of Arts, classes will be arranged for the study of social work both in theory and in practice, and the outlines of social science. The University courses will deal with the fundamental principles of social relations, in connection with such departments as those of Philosophy, Economics, Biology, Hygiene, and Education. These courses will be supplemented by the practical and theoretical study of philanthropic and charitable institutions, their aims, methods, and administration. It is hoped that in every case the teaching will be related to the actual programme of work now being undertaken by various typical institutions. The opportunity will be given of obtaining coincidently practical experience on the staff of such typical institutions, which ought to serve as the clinic of the course.

In addition to whole-time students who are prepared to take courses leading to a diploma, the work of the new department ought to appeal to part-time students such as the following:—social workers, school teachers, theological students, volunteers in such agencies as the settlements, patriotic fund and others, church workers, prison officials, outdoor nurses, etc.

THE TRAINING OF TEACHERS.

THE FIRST-CLASS ACADEMY DIPLOMA.

In order to qualify for this, the highest teaching diploma of the province, students are required to take, during the last two years of their undergraduate course, courses 1 and 2 in the Department of Education; and (unless they hold the Model Diploma or show an equivalent in successful teaching experience) to do the specified fifty half days of practice and observation, either before or after graduation. See page 124. They are also required to take in the fourth year a course on the principles and practice of physical education in relation to schoolwork. This entitles them, if successful, to the Strathcona B. Certificate. Full particulars on page 296. Miss Cartwright, Mr. ————————

School Art. A course of twenty lessons on the principles and practice of art in relation to schoolwork, comprising: brushwork, drawing, blackboard work, elements of design. Prof. Armstrong. Sat., 9-10.30 or 11-12.30.

Practical work done in this class is allowed on the recommendation of the instructors to count towards the specified period of observation and practice.

ELEMENTARY, MODEL AND KINDERGARTEN DIPLOMAS.

The training for these diplomas is given at Macdonald College. (See Macdonald College Announcement.)

COURSES FOR TEACHERS OF SPECIAL SUBJECTS.

(Given under the Teachers' Training Committee.)

Physical Education. A one-year course leading to a diploma for physical instructors, recognized by the Council of Public Instruction. See page 298.

French. A summer school for teachers of French leading to a Specialist Diploma recognized by the Council of Public Instruction.

School Art. See above.

Kindergarten Assistants. A two-session course leading to a certificate, recognized by the Council of Public Instruction, and accepted for entrance to the Kindergarten Class of Macdonald College.

Particulars of the above courses, which are published separately, may be obtained on application to the Registrar.

SCHOOL OF COMMERCIAL STUDIES.

COMMITTEE.

Sir William Peterson.	Professor Leacock.
Dean Moyse.	Professor Dale.
Professor Colby.	Dr. Ruttan.
Dr. Barnes.	Dr. Walter.
Dr. Milton L. Hersey.	Professor Harkness.

Mr. Sugars.

Along with the following gentlemen, as representative of business interests:—

Mr. Howard Murray.	Mr. R. J. Dale.
Mr. F. H. Clergue.	Mr. H. T. Meldrum.

STAFF OF INSTRUCTION.

Director-Secretary:—Mr. R. M. Sugars.

English	Mr. G. W. Latham.
Mathematics	Assistant Prof. Davies. Professor Harkness.
Political Economy	Professor Leacock.
History of Commerce	Mr. B. K. Sandwell.
French	Assistant Professor Morin. Dr. Villard.
German	Assistant Prof. Lambert.
Commercial Law	Mr. S. Dale-Harris.
Accountancy	Mr. R. M. Sugars. Mr. Lewis Brimacombe.
Elementary Science	Professor Barnes.
Drawing	Professor Armstrong.
Spanish	Mr. R. M. Sugars.
Scientific Management and Business Organization	Mr. R. M. Sugars.
Chemistry	Professor Evans.
Industrial Chemistry	Dr. Milton Hersey and Other Special Lecturers.
Economic Geography	Assistant Professor Cronk.
Banking	
Insurance	
Journalism	Mr. B. K. Sandwell.

The School of Commercial Studies offers:—

1. A systematic course of study, embracing the principal commercial sciences, and designed, with due modifications in each case, to prepare students for different business careers and for the profession of Chartered Accountant.

The course extends over three years, and students who successfully complete it will be granted the Degree of Bachelor of Commerce (B. Com.).

2. Extension Classes, open to anyone—whether engaged in business or not—whose general education and credentials are considered satisfactory to the University.

I.

COURSE FOR THE DEGREE OF BACHELOR OF COMMERCE.

Candidates for entrance must qualify by passing either of the following examinations:—

(1) The Matriculation Examination of the University for the B.A. or the B.Sc. Course (see page 47). French, however, is obligatory.

(2) An examination on the following subjects:—

1. **English** (two papers).
2. **History** (one paper).
3. **French** (two papers, and oral examination).
4. **Elementary Mathematics** [**Algebra and Arithmetic** (one paper) and **Geometry** (one paper)].
5. One of the following: **Botany, Chemistry, Physics** (one paper).

For particulars of the work in each subject, see pages 116 to 142. No student will be admitted who has not passed in all the subjects.

The Course of Instruction is as follows:—

FIRST YEAR.

1. **English** (3 hours).
2. **Mathematics** (4 hours).
3. **French** (4 hours).
4. **Economic Geography** (1 hour).
5. **Accountancy** (3 hours).
6. **Political Economy** (1 hour).
7. **General History** (2 hours).
8. **Drawing** (2 hours).

SECOND YEAR.

1. **English** (3 hours).
2. **Mathematics** (4 hours).
3. **French** (4 hours).
4. **Economic Geography** (1 hour).
5. **History of Commerce** (1 hour).
6. **Accountancy** (3 hours).
7. **Commercial Law** (2 hours).
8. **Commercial Organization** (1 hour).
9. **Chemistry** (2 hours before Christmas).

THIRD YEAR.

(a) Obligatory Subjects.

1. **English** (3 hours).
2. **Mathematics** (2 hours).
3. **French** (4 hours).

(b) Optional Groups.

(The student must select one of the following groups).

I. ACCOUNTANCY.

(a) **Theoretical Work, Problems and Exercises in Accountancy and Auditing** (3 hours).
(b) **Laboratory Work in Accountancy and Auditing** (2 hours).
(c) **Industrial Organization** (1 hour).

II. MANUFACTURING.

(a) **Industrial Organization** (1 hour).
(b) **Technical Work and Shop Work** (2 hours).
(c) **Machine Drawing** (1 hour).
(d) **Cost Accounting** (equivalent to 1 hour).
(e) **Industrial Chemistry** (equivalent to 1 hour).

III. BANKING, INSURANCE, FINANCE.

(a) A selection of two or more courses in **Advanced Economics** (equivalent to 4 hours).
(b) A special course in **Banking** (1 hour) *or*
A special course in **Insurance** (1 hour).
(c) **Investments** (equivalent to half-an-hour).
(d) **Insurance Accounts**, or **Bank Accounts** (equivalent to half-an-hour).

IV. TRADE AND COMMERCE.

(a) A second modern foreign language:
  (1) **German** (4 hours) *or*
  (2) **Spanish** (4 hours).
(b) **Economics of Transport** (1 hour).
(c) **Trade Returns and Trade Journals** (1 hour).

To obtain the diploma of **Licentiate in Accountancy,** which carries with it right of entrance into the Association of Accountants in Montreal (Chartered Accountants), or into the Institute of Accountants and Auditors of the Province of Quebec, the student must satisfy the following conditions:

(a) He must pass all the examinations required for, and leading up to, the Degree of Bachelor of Commerce.
(b) He must pursue the course of studies prescribed in this programme for Accountancy students.
(c) He must comply with all ordinances regulating the practical work to be done by students during the vacation.
(d) He must spend at least one year, subsequent to his obtaining the Degree of Bachelor of Commerce, in the office of a practising accountant.
(e) He must then pass successfully a Final Examination in Accountancy and Auditing before a board of five examiners, composed as follows: the Director-Secretary of the School of Commercial Studies, two Professors of McGill University, a member of the Association of Accountants in Montreal, and a member of the Institute of Accountants and Auditors of the Province of Quebec; or before a board composed of four examiners, in case either of the Associations mentioned fails, after due notice, to nominate its delegate; or before a board composed of three examiners, in case each of the Associations mentioned fails to nominate its delegate.

POLICY OF THE SCHOOL.

In all subjects the work will be, as far as possible, of a practical nature. Thus the English courses will include a drilling in letter-writing, précis-writing, and the preparation of reports. The French, German and Spanish courses will aim at imparting facility in speaking as well as in writing, and will consider the special phraseology employed in business correspondence. The mathematical and scientific courses will deal in the fullest manner with applications to industry, commerce, and finance. In the lectures on History, on Political Economy, and on Commercial Law, the aim will be in the first case to trace the growth

and development of modern ideas and institutions; next, to impart a knowledge of those general economic principles which are necessary to a full understanding of other subjects; in the third instance, to give the student such an acquaintance with the law as may be of real service in everyday business transactions. Finally, in Accountancy, the conditions and methods imposed by the increasing complexity of commercial, industrial and financial organizations will be considered in detail.

At the same time it will be among the chief concerns of the School of Commerce to accustom the student to the exercise of independent thought on all subjects, and particularly on those related to industry, commerce, and finance. To this end he will be expected from time to time to analyse his mental attitude towards each subject, to note the bearings of each on all other subjects, and to embody the results of his analysis in an essay or essays. These methods will compel him to call into play his independent judgment, and will thus assist in developing those qualities of adaptability, self-reliance, and resourcefulness that make for leadership.

FEE FOR COURSE.

The sessional fee is that of the Arts course, namely, $58.00. At the request of the students themselves, and by the authority of Corporation, an additional fee of $10.00 will be exacted for the support of the Literary Society, the Undergraduates' Society, the Canadian Club, the Union, the "McGill Daily," and Athletics.

COURSES OF LECTURES.

English.

The fundamental purpose of the courses in English is to train students to deal with such problems of expression as arise in commercial life. Considerable attention will be given to business correspondence and other forms of commercial writing. The interests of students, however, are best served, even for these special purposes, by a more general training in English. These courses will therefore include practice in various kinds of writing, as well as some study of modern English literature. As far as possible the writing prescribed for students will be related to the work they are doing in other classes.

The following is a brief outline of the work:—

FIRST YEAR.

Informal lectures on various aspects of English Composition, *e.g.*, choice of words, sentence-structure, punctuation, selection and arrangement of material; letter-writing and business correspondence; discussions of a few representative works of modern English.

SECOND YEAR.

Continuation of work of the first year. Writing of reports; study of contracts and other commercial documents; essays dealing with the subject-matter of courses on Business Organization, Economics, History of Commerce.

THIRD YEAR.

In this year the student, while continuing the work begun in the first year and carried on into the second, will be further required to write a series of essays involving research work.

French.

The study of French will be first approached from the literary side, both in order to increase its value to the student as an element of culture and in order to afford a sufficient back-ground for the commercial studies which are to come later. These commercial studies will begin in the second year and will comprise about half of the work done in that year. In the third year the work will be almost entirely of a commercial character.

The following is a synopsis of the work:—

FIRST YEAR.

The student will have a choice between:

(a) The Advanced Arts Course in French, as indicated on page 133; and

(b) The Ordinary Arts Course in French (see page 133) strengthened by tutorial class work.

SECOND YEAR.

In this year the work will be divided into two sections:—

I. A selected Arts course. (See page 134.)

II. Work of a commercial nature, embracing:

Commercial Correspondence.—Letters of introduction, offers of services, inquiries, acceptance of offers, execution of orders, circulars, invoices and accounts sales; Study of Trade Reports and Commercial Documents; Study of Contracts.—Bills of sale, mortgage deeds, bills of lading, charter-party, insurance contracts.

THIRD YEAR.

During this year one hour a week will be devoted to a study of modern French literature. The remaining 3 hours will be taken up with commercial work, which may be conveniently divided into:

(a) Commercial Correspondence, Study of Trade Reports, etc., in continuation of work begun in the second year; and (b) Colloquial French.

(The text-book to be used for this part will be P. Clerget, Manuel d'économie commerciale).

The students will be called upon to take part in discussions, which will follow addresses to be delivered by French speakers on commercial and industrial subjects. Visits, too, will be organized to French commercial and industrial establishments, and all explanations during these visits will be given in the French language.

Class instruction in the three years will be given in French.

Mathematics.

FIRST YEAR.

In this year the work will be that prescribed for First Year Arts students and will afford a sound training in general mathematics.

SECOND YEAR.

The second year work will be divided into two portions, as follows:

I. Commercial Mathematics, embracing:—
contracted methods of multiplication and division; use of the slide rule; use of logarithms; general theory of interest and discount; annuities; the amortisation of bonds.

II. Analytical Geometry with special reference to graphic methods.

THIRD YEAR.

This year will be devoted to a study of the principles of the infinitesimal calculus and its application to the work of the two preceding years.

This three-year course in mathematics will provide an excellent basis or starting-point for those who wish to study actuarial science and enter the actuarial profession.

Accountancy.

The accountancy work has been carefully graduated and correlated, and is intended not merely to fulfil its part in a general scientific business training, but also to prepare and assist those who purpose taking up accountancy as a profession.

No previous knowledge of bookkeeping is assumed or required; the subject is developed rapidly along the lines that prevail in practice.

FIRST YEAR.

The following plan will give a good indication of the ground covered in this year:—

The principle of debit and credit; books of original record, how they should be kept, and how utilized; documents employed in connection with them; sales, purchases, consignments, and how to handle them; returns inwards, and returns outwards; subsidiary ledgers, and controlling accounts to represent them in the general ledger; special forms of cash-book required to facilitate such control; notes and drafts, discounting and renewal of notes, and the proper methods of treating these operations in the accounts; single entry, how to change to double entry, and vice versa; distinction between revenue and capital expenditure; income statement and balance sheet; single proprietorships and partnerships.

The student will be required to sift and classify his detail, write up all the books of record and account mentioned, and focus results of the various transactions or operations into the final statements.

SECOND YEAR.

The subject matter for this year will be as follows:—

Special Problems that occur in connection with partnerships: The deed of partnership; rights of partners; effects of dissolution; methods of distributing profits; the bringing in of other partners; goodwill; transformation of a firm into a corporation; Departmental Accounts: Organisation and records required; sectional balancing of ledgers and systems of internal check; analysis of expenses; distribution of expenses over departments; results in each department; comparison of these results with those shown in other periods; Manufacturing Accounts: The elements of cost accounting; depreciation and methods of providing for it; allowances and reserves; sinking-funds.

Theory of the Balance Sheet: Its form and elements; valuation of these elements; comparative balance sheets; double account system of balance sheet; The Income Statement.

THIRD YEAR.

The work of the Third Year will embrace:—

(a) Branches, Consolidations, Mergers: Accounts of Head-office and of branches; consolidated statements and balance sheets; control of stock and bond issues; minority holdings; advances to subsidiaries; inter-company profit; capital assets and capital liabilities; initial surplus and goodwill.

(b) Corporation Finance: Status and interior organization of the corporation; how to incorporate; promotion and underwriting; stock and bond issues; temporary loans; initial operations; earnings and their disposition; secret reserves; betterments; surplus; control exercised by directors and majority stockholders; its abuse; consolidations; insolvency and receiverships; re-organizations; different bases of capitalisation.

(c) Problems connected with Stock and Bond Issues: Bonus stock; treasury stock; watered stock; discount and premium on bond issues.

(d) Cost Accounting: General considerations, the advantages of a costs system; the control of stores, purchasing and issuing, the running inventory; quality, remuneration, and control of labour; overhead expenses or "burden," methods of distributing it and their limitations; waste and leakage in factories; idle time; calculation of machine rates; connection of costs records with general accounts.

(e) Accounting in Insurance Companies: Sources of income; expenditures to be incurred; registers and their uses; control of agents; reserve and its constitution; sources of profit; presentation of accounts; indications of strength or of weakness.

(f) Bank Accounts: Classification of operations; sources of entries in books; registers, diaries, ledgers; correlation of departments; cash journal or daily summary; published accounts.

(g) Municipal Accounts: Principles involved; current methods of reporting statistics; inadequacy of these methods; methods now recommended; sources of revenue; estimated revenue; appropriations; balances; various forms of municipal debt; municipal bonds; contract and order liabilities; sinking-funds; form of balance sheet recommended.

(h) Insolvency Accounts: Various schedules adopted; statement of affairs; realisation and deficiency account; deficiency statement.

(i) Trustees' Accounts: Executorships and administratorships; accrued claims; accrued expenses; corpus and income.

(j) Peculiarities in the form of accounts required in other undertakings will also be dealt with.

(k) Auditing: General principles applicable to all undertakings; special considerations applicable to particular concerns; laboratory practice in auditing.

Business Organisation and Scientific Management.

A course of lectures extending over the Second and Third Years and dealing with the following subject-matter:

I. Commercial Organisation: Development of organisation; study of markets; organisation of an export business; sources of information; consular service; fundamental principles of banking and exchange; study of the various problems connected with distribution; the purchasing department; the sales department; the credit department; the traffic department; advertising; organisation of accounts; preparation of periodical reports.

II. Industrial Organisation: The launching of an industrial enterprise; the planning of a factory; departmental functions; the purchase and control of raw materials; labour, and its control; wage systems; welfare work; power and its transmission; the reorganisation of a factory; the committee system; the location of industries; principles of management; types of management; departmental relations; standardisation and equipment; standardised operations; written standard-practice instructions; adequate records; efficiency rewards.

The student will be required to write in idiomatic English a summary of each lecture.

Economic Geography.

Course extending over the first two years.

General.

The solar system; epochs in the history of the earth; divisions of the surface of the earth into land and water; notions of geology;

effect of the sun's heat and rays; effect of altitude; effects of moisture, temperature, and winds; movements of the sea; the great ocean currents; mankind, the different races and their characteristics; distribution of natural products; centres of population, and reasons why they have developed; trade; chief commercial products, their production, and distribution; chief traffic movements.

Canada.

General configuration of Canada,—mountains, seas, lakes, rivers; climatic conditions; natural products of Canada,—products of agriculture and the farm, products of the mine, products of the sea and rivers; population centres, their history and growth.

Canadian Products:—

(1) For home consumption: (a) to satisfy the needs of the population, (b) as raw materials in industry; location of the important industries, reasons for such location; markets available; means of distribution, roads, canals, rivers, railroads; cost of distribution; possible improvement and development of establishment industries; creation of new industries and markets.

(2) For exportation: (a) raw materials, (b) manufactured products,—to what countries exported, and how used in those countries;

General Study of Foreign Markets:—distance, climate, population; habits; credit; currency; stability of government; customs tariff; competition; transport facilities.

Importation:—

Products imported; from what countries imported; for what purposes employed,—(a) for direct consumption, (b) as raw material for industry; special reference to raw materials exported from Canada that come back in the form of manufactures.

Economics of Transport.

This course deals with the following subject-matter:

Water Transportation: Ocean shipping; services, rates, and organisation; shipping and navigation policies of the leading commercial nations; lake, river, and canal transportation in Canada and the United States.

Railway Traffic: Organisation and service of the traffic department; systems of rates; traffic problems, such as car service, demurrage, and claims; legislative regulation of operations.

Trade Returns and Trade Journals.

This study will include an analysis of Board of Trade returns, consular reports, and other sources of information on trade and commerce.

Investments.

A course of lectures dealing with: The nature and variety of securities; government stocks and bonds; municipal bonds; railroad securities; corporation stock and bond issues; real estate mortgages; analysis of financial reports; tests of investments; care of investments; the Stock Exchange market; investment by banks, trust companies, and insurance companies.

History of Commerce.

A review of the history of commerce from the dawn of civilisation to modern times, tracing the influence of physical, economic, political, and technical factors in its development.

Drawing.

FIRST YEAR.

Outline of course:—

A training of the student to handle the pencil freely in making sketches or simple drawings of things; the execution of sketch plans and side and end elevations, properly arranged in relation to one another so as to display parts and proportions; instruction in dimensioning; exercises in geometrical drawing, the making to scale of ruled

drawings, drawings by the method of perspective projection commonly in use among architects; practice in making diagram drawings, descriptive of general arrangements and of mechanical actions and appliances; instruction in tracing, transferring and blue-printing; practice in simple types of freehand lettering, especially such lettering as might be found useful in office work; an introductory study of architecture, including simple exercises in the building and construction of floors, partitions, etc., with a consideration of the principles of good taste, in the matter of proportion and execution, as applied to doors, windows, office furniture, etc.; a study of general principles in art, with special reference to form, colour harmony, and ornament. Exercises in simple design.

THIRD YEAR.

Special course in the third year for students interested in manufacturing.

This course is intended as an introduction to the principles of machine construction. The student will be shown the different methods in which machinery may be arranged, the relative efficiency of each method, and the various structural and other conditions that must be provided for. The work will include an intelligent sketching of machinery and mechanism in the workshops—the Machine shop, the Patternmaking and Carpentry shop, the Smithy, and the Foundry, and in the mechanical and electrical laboratories of the Science Faculty.

Banking.

A course of special lectures on banking practice for Third Year students.

Insurance.

A course of special lectures on Insurance for Third Year Students.

Technical Shop Work.

This course is intended to give a first-hand knowledge of shop work and the handling of tools. It may be subdivided into:

(a) Work at the joiner's bench and at the anvil.

(b) Casting and Moulding.

(c) Welding.

(d) Work at the lathe.

II.

EXTENSION CLASSES.

The Extension Classes are open to the public, no examination test being required. They embrace (a) subjects that form a part of the curriculum, and (b) subjects that lie outside this curriculum. At the conclusion of each session written examinations will be held, and special certificates will be awarded to successful students.

Civil Service students and those preparing for the examinations held in connection with the Institute of Secretaries, London, England, and with the Association of Accountants, Montreal, will find some of these classes especially useful. The programme of classes, as organized for 1918-19, together with the scale of fees, hours of lecture, etc., is as follows:—

(A) SUBJECTS THAT ENTER INTO THE DIPLOMA CURRICULUM.

Political Economy.

A course of 25 lectures, especially intended to meet the needs of candidates studying for the final examination of the Association of Chartered Accountants, candidates for the Civil Service Examination, Division B, junior clerks in banks, and other persons interested in the subject from a practical standpoint.

The following subdivisions will indicate broadly the subject-matter dealt with in these lectures:—

Wealth and its production; the theory of value; the theory of monopoly price; money; index numbers and the rise in the cost of living; international trade and the foreign exchanges; free trade and protection; distribution—rent, wages, interest, profits and the theory of population; taxation and public finance; social legislation and socialism; the economic aspect of the war.

Thursdays, at 7.30 p.m.

Fee for the course, $5.
Professor Leacock.

Chemistry.

A. The Chemistry of Everyday Things.

A course of about 20 lectures, dealing in a simple way with the chemistry of air, water, fuels, foods, metals, etc., and designed to bring out the fundamental principles involved in the more important chemical processes that are carried out in the home and in chemical works.

The lectures will be profusely illustrated by specimens, experiments, lantern-slides, and diagrams.

Wednesdays and Fridays, at 7.30 p.m. Fee for the course, $5.
Professor Evans.

B. Industrial Chemistry.

A course of 25 lectures, given after the Christmas holidays, on the important industrial processes involving chemistry. Only those processes which are represented in Canada will be discussed.

These lectures will be given by a number of chemists and engineers, each an expert in the subject on which he will lecture, and they will not necessitate, for their proper comprehension, any special knowledge of chemistry on the part of the student.

The course will treat of cements, paper and pulp, nitroglycerine, iron and steel, fuels and their uses, paints and oils, etc., etc. A full list of the subjects will be published later with the names of the lecturers.

Wednesdays and Fridays, at 7.30 p.m. Fee for the course, $5.
Dr. Milton Hersey and other special lecturers.

Elementary Science.

This course of 20 two-hour lectures is primarily arranged to give a popular account of the natural phenomena that constitute the essential groundwork of all the sciences, and that are of fundamental importance for even a general understanding of the applications of science to industry.

The lectures will be profusely illustrated by experiments, and the direct bearing of the subject on the common incidents of life will be particularly emphasized. As far as possible the terminology employed will be of a non-technical character, and little knowledge of mathematics will be necessary beyond the common rules of arithmetic and the use of such symbols as can be easily explained.

A brief summary of the course is as follows:—The laws of mechanics; the industrial applications of power; the constitution of matter; the simple laws of chemical action; the production of sound; illumination, and the laws of light; magnetic and electrical forces and their application in the use of dynamos and motors, in lighting, in heating, and in electro-chemistry.

Questions will be set at each lecture on the work of the previous week, and the answers will be graded so that those who follow the course may have some idea of the progress they are making.

Any good text-book of Physics may be used for reference, but Lynde's Household Physics (MacMillan & Company) is especially recommended. Fee for the course, $10.

Mondays, at 7.15 p.m. Professor Barnes.

Spanish.

A course of 40 lectures, intended for beginners.

With the aid of a suitable grammar and text-books, the student will be first taught to read in Spanish and to translate, with a view to his acquiring a correct pronunciation and a vocabulary. When the latter is deemed sufficient for the purpose, conversational practice will be introduced on current topics or on the subject-matter of the text-books.

It is hardly necessary to dwell on the advantages a knowledge of Spanish would possess for those who may be called upon to enter into business relations with Spanish America.

Mondays and Wednesdays, at 8.15 p.m. Fee for the course, $10.

Mr. Sugars.

Commercial Law.

A course of 25 lectures on the general principles of commercial law, specially designed to render service to the business man, banker, and accountant in their everyday transactions, and to help students who may be preparing for any of the examinations held in connection with the Association of Accountants in the Province of Quebec.

The subject is taken up from a practical point of view, with illustrations from actual cases, and the lectures deal with the questions that are likely to arise in the ordinary course of business.

The matter treated is as follows:—Persons and their capacity to contract—minors, married women, and other persons whose capacity is limited; the different kinds of property; the general principles of contracts; payment, and other methods in which debts are extinguished; the sale of goods; the lease and hire of property; the lease and hire of services; building contracts; carriers by land and water; agency; hypothec; pledge; contracts of guarantee; bills of exchange and other negotiable instruments; partnership; corporations; banking; rights of creditors over a debtor's property; privileges; insolvency law.

Each lecture lasts an hour and a half, and is complete in itself. The course is open to the public, both men and women.

Tuesdays, at 7.45 p.m. Fee for the course, $10.

Mr. Dale Harris.

(B) SUBJECTS OUTSIDE THE DIPLOMA CURRICULUM.

An Introduction to Journalism.

A course of 20 lectures, dealing with the matter indicated in the following summary:—

1. Introductory—Organisation of the newspaper; editorial, mechanical and business departments; organisation of the editorial department; brief sketch of functions of mechanical and business departments as affecting the editorial department.

2. What constitutes "news"; development of the conception of news from the eighteenth century to present time, with reasons for changes; the rise of the "human interest" element, and of fictive treatment of news facts; local news, its character and sources, and methods of procuring it.

3. Local news continued; methods of competition in regard to news; "created" news:—the interview, the rumor, personal political gossip.

4. Non-local news, its scope and relative value; the organisations for securing and distributing it (1) in Canada, (2) in the British Empire, (3) in the United States and the world.

5. Newspaper "features" other than news—their character and value; the cartoon; illustration as a form of news, and illustration of a non-news character.

6. The "editorial," its qualities and functions; the "departments"—literature, art, drama, music, women's interests, sport, etc.

7. The reporter—qualifications, requisite knowledge, methods of advancement, prospects; necessity of the reportership as a preliminary training for all higher newspaper work.

8. The "news story"—its literary style and characteristics; reasons for the development of this style, its strength and weakness; imitative tendency of newspapers and lack of real criticism of newspaper work from the standpoint of the consumer.

9. "Make-up"—headings and arrangement of matter; the psychology of the headline; Canadian, English, American and French practice compared.

10. Conclusions—High public value of the services of trained and educated newspaper men in Canada, and need of a large supply of such men; effects of capitalistic ownership of newspapers, its powers and limitations; decline of the newspaper as a direct influence upon public opinion; the party newspaper and its functions.

Wednesdays, at 5 p.m.

Fee for the course, $10.

Mr. B. K. Sandwell.

Algebra.

A course of 25 lectures, which will be found especially useful by Civil Service candidates and by those who desire to pass the examinations held in connection with the Association of Chartered Accountants. A number of lectures will be devoted to higher arithmetic problems.

Thursdays, at 8.30 p.m. Fee for the course, $5.00.
Assistant Professor Davies.

English Composition and Business Correspondence.

A course of 25 double lectures on the general principles of English Composition with especial reference to commercial correspondence, and other kinds of writing that are likely to be serviceable in business life. Such topics as mastery of English idioms, the increasing of one's vocabulary, sentence-structure, clearness and force will be discussed. There will be frequent opportunities for practice in writing.

Students in Accountancy offices and those intending to take up secretarial work should derive great benefit from this course.

Friday evenings, from 7.30 to 9.30. Fee for the course, $10.
Mr. Latham.

Elementary Accountancy.

A series of lectures to be given three times a week, and dealing with the subject-matter outlined on page 156 for First Year Commerce students.

This course is intended for students preparing for the Intermediate Examination held in connection with the Association of Accountants in Montreal, and will be found especially useful by anyone desirous of laying a solid groundwork in Accountancy.

Mondays, from 7.30 to 8.30 p.m., and Wednesdays from 7.30 to 9.30 p.m. Fee for the course, $10.
Mr. Brimacombe.

Higher Accountancy.

A course of 20 lectures, dealing with the following subject-matter:—

Cost Accounting:—General considerations, the advantages of a costs system; the control of stores; purchasing and issuing, the running inventory; quality, remuneration, and control of labour; overhead expenses or "burden," methods of distributing it and

their limitations; waste and leakage in factories; idle time; calculation of machine rates; connection of costs records with general accounts.

Accounting in Insurance Companies:—Sources of income; expenditures to be incurred; registers and their uses; control of agents; reserve and its constitution; sources of profit; presentation of accounts; indications of strength or of weakness.

Mergers, etc.:—Branch accounts; consolidated balance sheets; study of the balance sheet; comparative balance sheets; accounts of trusteeships and executorships; accounts of municipalities; reorganizations.

Corporation Finance:—Different bases of capitalization; share capital; borrowing, long-time and short-time obligations; promotion and underwriting; bonus stock; watered stock; treasury stock; discount and premium on bond issues and problems connected therewith; secretarial work; the Stock Ledger; preparation of reports.

Wednesdays, at 7.15 p.m. Fee for the course, $5.00.
Mr. Sugars.

English Literature.

A course of 20 lectures on Representative Modern Dramatists and their Work, from 1860 to the present day.

The following is a brief summary of the course:—

France—Dumas to Rostand; England—Jones, Pinero, Barker, Shaw, Galsworthy; Ireland—Yeats, Synge, Lady Gregory; Germany—Hauptmann, Sudermann; Norway—Björnson, Ibsen; Sweden—Strindberg; Italy—D'Annunzio; Spain—Echegaray.

Fridays, at 5 p.m. Fee for the course, $5.00.
Professor Lafleur.

Payment of Fees for Extension Courses.

Fees for Extension Classes should be paid at the Bursar's office before the session begins. For the convenience, however, of those who may be unable to get to the University during business hours, a person authorized to collect the fees will attend at the lecture hall about the beginning of the course. All fees must be paid by the evening of the third lecture, and in no case shall any fee be returned.

FACULTY OF APPLIED SCIENCE.

DEGREES.

The degrees conferred by the University upon such undergraduates of the Faculty as fulfil the conditions and pass the examinations hereinafter stated are "Bachelor of Architecture" (B.Arch), and "Bachelor of Science" (B.Sc.), mention being made in the diplomas of the latter of the particular course of study pursued.

Students who take the Bachelor of Science degree in one of the courses provided by the Faculty may graduate in any of the remaining courses by attending one or more subsequent sessions and passing the prescribed additional examinations.

Students who wish to obtain the degrees of B.A. and B.Sc. (Applied Science) in six years, will spend the first three years in Arts before attending any classes in Applied Science, except in the summer courses referred to below; they will then enter the Faculty of Applied Science and devote the remaining three years entirely to the work of this Faculty. The special summer courses mentioned take the place of the work in descriptive geometry, drawing (freehand and mechanical) and shopwork, which form part of the regular course of the first year in Applied Science. This work must be taken in two periods of one month each (in the month of September), prior to the regular work of the second and third years in the Faculty of Arts; and must not be taken during the regular session in any of the three years spent in that faculty.

Every student who intends to take this double course must notify the Dean of the Faculty of Applied Science to this effect, on or before the close of his first year in Arts (May 1st), and must pay the fee of $50.00 to the Bursar, for the first of his summer schools, before 1st September following.

By a resolution of the Institution of Civil Engineers (England) the holders of the degree of B.Sc., in the courses of civil, electrical, mechanical, and mining engineering, who are desirous of becoming associate members of the Institution, may under certain conditions be exempted from the examination prescribed for admission to the Institution.

EXAMINATIONS.

1. Final examinations are held in all lecture subjects. Class examinations, for which credit may be given in the sessional standing, are held from time to time, at the option of the professor.

2. Students who have failed in one or more subjects of the curriculum shall be required to make good their standing by passing:—

(1) The regular supplemental examinations held immediately before the opening of the session, *or*

(2) The final examinations in a subsequent session, *or*

(3) Special examinations, which shall be given only under exceptional circumstances and by authority of the Faculty.

3. No undergraduate will be allowed to take instruction in any subject until he has passed the examinations in the necessary pre-requisite subjects, for particulars regarding which see page 239.

4. Failures in drawing room and laboratory subjects may under certain conditions be made good by attendance on special classes during the afternoon of the first six weeks of the following session.

SCHOLARSHIPS, PRIZES AND MEDALS.

See pages 81 to 83.

FEES.

See page 89.

ENGINEERING SOCIETIES.

1. The headquarters of the Engineering Institute of Canada are located in Montreal. Students in all departments of engineering are strongly recommended to become student members of the Institute, which they can do on payment of a fee of $3.00. They are then entitled to the "Transactions," which are published annually, and to the use of the Society's rooms, 176 Mansfield Street. They also have opportunities of meeting the prominent engineers of the country, and of being present at the fortnightly sessions, at which papers are read on current engineering subjects and works of construction.

Students are invited to compete for the prizes which are offered by the Society.

2. Students in Mining and Metallurgy are strongly recommended to become members of the McGill Mining Society, which, although a student body (see page 233), is affiliated with the Canadian Mining Institute, the headquarters of which are in Montreal. Members of this Society receive the Transactions of the Institute without extra expense, and are entitled to attend all meetings and to compete for the prizes offered.

COURSES OF INSTRUCTION.

The instruction in this Faculty is designed to afford a thorough training of a practical as well as theoretical nature, in the following branches of applied science:—

I.—Architecture.
II.—Chemistry.
III.—Chemical Engineering.
IV.—Civil Engineering and Surveying.
V.—Electrical Engineering.
VI.—Mechanical Engineering.
VII.—Metallurgical Engineering.
VIII.—Metallurgy.
IX.—Mining Engineering.

Military Instruction (subject No. 400) will be given as alternative to certain subjects in connection with courses III to IX, inclusive (see pages 179 to 191). Course 400 comprises "Group B, 3 and 4, and Group C, 5" as on page 300. Students who complete these courses to the satisfaction of the Department of Militia and Defence will have fulfilled the main requirements for a Lieutenant's commission in the Canadian Engineers.

DETAILED CURRICULUM.

The regular work of each session in Applied Science will end about the 1st of May, at the close of the sessional examinations. The summer work will be taken during the month of September (see page 192).

The curriculum, as laid down in the following pages, may be changed from time to time as deemed advisable by the Faculty. The work prescribed for the first two years is the same in all courses, except in the Chemistry and Metallurgy Courses, and in that leading to the degree of Bachelor of Architecture (Courses I, II and VIII).

The first two years of the engineering courses (III to VII and IX) are mainly devoted to mathematics, mechanics, physics, chemistry, drawing and shopwork, as it is deemed necessary that students in these courses should master the general principles underlying scientific work before commencing the subjects of the professional courses.

The subjects of instruction in the engineering courses in these years, and the number of hours per week devoted to each, are as follows:—

FIRST YEAR

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Algebra	192	5	5	..	..	218
Descriptive Geometry	341	1	1	⅔	⅔	212
English	131	2	2	..	..	215
Freehand Drawing and Lettering	342, 343	1	1	⅔	⅔	212
Geometry	191	3	..	..	..	218
Mechanical Drawing	211	..	..	2	2	219
Mechanics	194	2	2	..	..	219
Physics	311	2	2	..	..	234
Physics Lab	312	..	..	1	1	234
Shopwork and Shop Methods	12 to 215	..	..	2	2	220
Trigonometry	193	..	3	..	..	218

All undergraduate students of the first year, except those in the course of Architecture, who at the close of the first term have failed to obtain an average of 33 per cent. in the following five subjects, viz.:—mechanics, geometry, algebra, physics and descriptive geometry, will be required to withdraw from the Faculty.

In the case of students in the course of Architecture the same rule applies, the five subjects, however, being mechanics, geometry, algebra, physics and architectural drawing.

Any other student of the first, or any subsequent year, whose record is found to be unsatisfactory, may at any time be required to withdraw from the Faculty.

All students of the First Year, except those in the Department of Architecture, who have pursued their course of study without serious interference due to personal illness, domestic affliction or urgent affairs, and who fail in more than three subjects at the end of the First Year, or in three subjects aggregating over 400 possible marks, shall be required to repeat all the work of the First Year, and while so doing shall be debarred from taking any more advanced work.

SECOND YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Anal. Geometry	197	3	..	..	..	219
Calculus	198	3	3	..	..	219
General Chemistry	51	3	3	..	..	202
General Chem. Lab	52	..	..	1	1	202
Graphical Statics	82	..	..	..	1	206
Mapping	348	..	..	1	1	236
Materials of Construction	81	1	1	..	..	206
Descriptive Geometry and Perspective	345	..	..	1	1	212
Mechanics	83	..	3	..	..	206
Mech. of Machines	218	1	1	⅔	⅔	220
Physics	315	2	2	..	..	234
Physics Lab	316	..	..	1	1	235
Shopwork and Shop Methods	220, 221	1	1	1	1	221
Surveying	346	2	2	..	..	236
Surveying Field Work	347	..	..	..	..	236
Summer Reading	132	..	..	..	..	193

NOTE—Surveying field work, 4 weeks, beginning September 2nd, 1918. See pages 192 and 236.

For other summer work see page 192.

I. ARCHITECTURE.

The course for the degree of Bachelor of Architecture extends over five years. Full information is given in the Announcement of the Department, which will be sent to interested persons upon request to the Registrar of the University.

Besides work in the Department of Architecture proper, teaching is provided in the Faculties of Arts, Law and Medicine. The work in the four classes in design, A, B, C and D, is independent of the work in the five years, *and good standing in design, class D, must be obtained prior to receiving the degree.*

The object of the curriculum in the first year is to impart such general culture, scientific knowledge and skill of hand as will prepare the student to profit by the work of the succeeding years, under the heads of:—

(*a*) Design; (*b*) Aesthetic; (*c*) Archæology; (*d*) Science; (*e*) Construction; (*f*) Professional Practice; (*g*) Drawing.

An essay on an historical or theoretical subject is required in each term from all students following the historical or theoretical courses.

In all courses studio work goes hand in hand with oral teaching, with a view to the practical application of the theory, while at the same time affording opportunity for the acquisition of power in draughtsmanship and practice in design.

An arrangement has been concluded between McGill University and the Province of Quebec Association of Architects, whereby holders of the Bachelor of Architecture degree are admitted to practice in the Province after spending one year in the office of a member of the Association, and passing an examination in design, instead of having to take the regular prescribed entrance examinations. The office experience may be gained by working in the summer vacations.

FIRST YEAR.

SUBJECT	Subject Number	Lectures per week		Draughting Room and other periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
General History	Arts (13)	2	2	..	..	130
English	131	2	2	..	..	215
Algebra	192	5	5	..	..	218
Geometry	191	3	..	..	..	218
Trigonometry	193	..	3	..	..	218
Mechanics	194	2	2	..	..	219
Physics	Arts (42)	2	2	..	..	140
Physics Lab	Arts (43)	..	..	1	1	140
Elements of Architecture	5	1	1	..	..	196
Architectural Geometry	18	1	1	..	..	201
Architectural Drawing	31	..	..	2	2	200
Freehand Drawing	36	..	..	2	2	201

SECOND YEAR.

Design 1	1	..	..	2	2	196
Elements of Composition	6	1	1	..	..	196
Building Construction	24	1	1	..	..	199
Building Details	25	..	..	2	2	199
Structural Engineering I	26	2	2	..	..	199
Struct. Eng. (Draughting) I	27	..	..	1	1	199
History of Classic Architecture	14	2	2	..	..	198
Graphical Statics	82	..	1	..	..	206
Surveying	346	2	2	..	..	236
Mapping	348	..	..	1	1	236
Architectural Drawing	32	..	..	1	1	200
Freehand Drawing	37	..	..	2	2	201
Summer Work	48	..	..	..	..	201
Surveying Field Work	347	..	..	..	..	236
Architectural Essay	44	..	..	..	..	201

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Draughting Room and other periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Design 2	2	..	..	3	3	196
Theory of Design	7	1	1	..	..	197
Structural Engineering, II.	28	1	1	..	..	200
Struct. Eng. (Draughting) II.	29	..	..	2	2	200
History of Mediaeval or Renaissance Archt.†	15 or 16	2	2	..	..	198
Ornament and Decoration‡	9 and 10 or 11 and 12	1	1	1	1	197
Perspective	19	..	..	1	1	201
Freehand Drawing	38	..	..	1	1	201
Architectural Drawing	33	..	..	1	1	200
Summer Work	48	..	..	..	..	201
Architectual Essay	45	..	..	..	..	201

FOURTH YEAR.

Design 3	3	..	..	5	5	196
Theory of Planning	8	1	1	..	..	197
History of Mediaeval or Renaissance Architecture	15 or 16	2	2	..	..	198
Ornament and Decoration	9 and 10 or 11 and 12	1	1	1	1	197
Hygiene	22	2	..	..	..	199
Heating and Ventilation	23	..	1	..	1	199
Architectural Drawing	34	..	..	1	1	201
Freehand Drawing	39	..	..	1	1	201
Modelling	40	..	..	1	1	201
Architectural Essay	46	..	..	..	..	201
Summer Work	48	..	..	..	..	201

FIFTH YEAR.

Design 4	4	..	..	8	8	196
Modern Architecture	17	2	2	..	..	198
Professional Practice	30	2	2	..	..	200
Engineering Law	175	1	1	..	..	218
Historical Drawing	35	..	..	1	1	201
Modelling	41	..	..	1	1	201
Architectural Essay	47	..	..	..	..	201
Summer Work	48	..	..	..	..	201

†The courses on Mediaeval and Renaissance Architectural History, numbers 15 and 16, are given in alternate years.

During the Session 1918-19, the History of Mediaeval Architecture will be given.

‡Ornament and Decoration courses, numbers 9 and 10, and 11 and 12, are given in alternate years. During the Session 1918-19, numbers 11 and 12 will be given.

For summer reading see page 193.

II. CHEMISTRY.

The course in Chemistry is arranged to give the student in the first two years a thorough knowledge of the fundamental principles of chemistry and physics, with sufficient mathematics to enable him to understand the theoretical parts of these subjects.

In the two subsequent years chemistry (inorganic, organic, analytical and physical) is taught both in its purely scientific aspects and in its relations to the various departments of commercial work. In the fourth year, students will specialize in either (a) inorganic *or* (b) organic chemistry, as indicated in the tabulated statement below. Special facilities are afforded for the presentation of graduate research work in various branches of chemistry.

FIRST YEAR.

As in Engineering Courses. For details, see page 172.

SECOND YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Analytic Geometry	197	3	..	..	..	219
Calculus	198	3	3	..	..	219
General Chemistry	75	4	4	..	..	205
Gen. Chemistry Lab.	53	..	..	4	..	202
Inorganic Qual. Anal.	54	..	1	..	..	202
Inorganic Qual. Anal. Lab.	55	..	..	..	4	203
Materials of Construction	81	1	1	..	..	206
Mechanics	83	..	3	..	..	206
Physics	315	2	2	..	..	234
Physics Lab.	316	..	..	1	1	235
Summer Reading	132	..	..	..	..	193

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Engineering Economics	171	..	2	..	..	218
Geology, General	141	2	2	½	½	216
Inorganic Quant. Anal.	61	1	..	..	..	203
Inorganic Quant. Anal. Lab.	76	..	..	6	6	206
Gen. Elementary Metallurgy	261	2	..	..	..	227
Mineralogy	142	2	2	..	..	216
Mineralogy, Determinat.	143	..	..	2	..	216
Organic Chemistry	56	3	2	..	..	203
Organic Chemistry Lab	57	..	..	..	2	203
Physical Chemistry	58	2	..	..	..	203
Summer School Fire Assaying and Metallography	263 & 264	..	..	..	..	227
Summer Essay or Reading	133	..	..	..	..	193

FOURTH YEAR.

Applied Electro-chemistry	70	2	..	..	..	205
Crystallography (opt.)	151	2	..	1	..	217
Engineering Law	175	1	1	..	..	218
Industrial Chemistry, Inorg.	68	2	..	..	..	205
Industrial Chemistry, Organic	69	..	2	..	..	205
Physical Chemistry and Lab.	66	2	2	2	1	204
Adv. Inorg. Chemistry	72	2	2	..	..	205
Inorganic Laboratory	77	1(a)	..	6(a)	7(a)	206
Ore Deposits (opt.)	148	..	4	..	..	217
Advanced Organic Chemistry	64	2	2	..	..	204
Organic Chem. Lab.	65	..	..	5(b)	6(b)	204
Food Chemistry	73	..	1(b)	..	..	204
History of Chemistry	74	..	1	..	..	205
Summer Essay	134	..	..	..	..	194

III. CHEMICAL ENGINEERING.

The aim of this course is to prepare students for positions demanding a knowledge of both chemistry and engineering. The duties of a chemical engineer require him to be conversant with chemical processes, the installation of chemical units, and to understand the construction of buildings, the installation and operation of machinery, etc. Accordingly the course of study combines a considerable amount of engineering with the maximum of chemical training which can be attained without overpressure.

Between the second and third years students taking this course must attend a summer session of four weeks in the chemical laboratories.

In the third year specialization commences, the time being about equally divided between chemical and engineering studies, and in the vacation between the third and fourth years all students must give at least six weeks to work in some chemical industry or to equivalent laboratory work satisfactory to the Professor of Chemistry.

In the fourth year the engineering studies are completed and the chemical studies which predominate are arranged in two alternative courses to meet the requirements of the students who cannot possibly study more than a few of the very varied chemical industries. These alternative courses fall broadly under one or other of two headings:—(*a*) inorganic, (*b*) organic, as indicated in the table below, and one or other of which the student will select. Should a student desire to prepare for an industry which requires more engineering knowledge than is provided in the regular course he may substitute additional engineering subjects for some of the chemical work. Details will be arranged on application to the Faculty through the Professor of Chemistry.

While every effort will be made to supply detailed information as to methods and plan of many of the important industries, and to provide facilities for experimentally carrying out the processes involved, the main aim will be devoted to the study of the principles which underlie economical production.

FIRST AND SECOND YEARS.

As in other Engineering Courses. For details, see pages 172 and 173.

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Engineering Economics	171	..	2	..	..	218
General Elem. Metall	261	2	..	..	..	227
Inorg. Quant. Anal	61	1	..	..	..	203
Inorg. Quant. Analysis Lab	62	..	..	3	3	203
Mech. Eng. and Lab	226 and 228	2	2	1	1	221
Mineralogy	142	2	2	..	..	216
Mineral, Deter	143	..	..	2	..	216
*Ore Dressing (opt.)	295	2	2	..	..	230
Organic Chemistry	56	3	2	..	..	203
Organic Chem. Lab	57	..	..	..	2	203
Physical Chemistry	58	2	..	..	..	203
Strength of Materials	87	2	2	..	..	207
Strength of Mats. Lab	88	..	..	..	1	207
Structural Design	90	..	1	..	1	208
Summer School. Inorg. Qual. Anal. and Lab	54 and 55	..	..	..	..	202
Summer Essay or Reading	133	..	..	..	..	193

FOURTH YEAR.

Elements of Elect. Eng	111	2	2	..	..	213
Elect. Eng. Lab	112	..	..	1	1	213
†Engineering Law (alt.)	175	1	1	..	..	218
†Hydraulics	101	1	..	½	..	210
Industrial Inorganic Chemistry	68	2		..	..	205
Industrial Organic Chem	69	..	2	..	..	205
Phys. Chem. and Lab	66	2	2	1	2	204
Metallography	262	..	..	..	1(a)	227
†Military Eng. (alt.)	400	2	2	..	1	300
Applied Electro-Chem	70	2		..	..	205
Electro-Metal. (opt.)	275	..	2	..	..	229
Electro-Metal. Lab. (opt)	276	..	..	..	1	229
Fire Assay	263	..	..	1(a)	..	227
Adv. Inorg. Chemistry	72	2(a)	2(a)	..	..	205
Inorganic Laboratory	67	1(a)	..	3(a)	4(a)	204
Advanced Org. Chem	64	2(b)	2(b)	..	..	204
Org. Chem. Lab	65	..	..	4(b)	2(b)	204
Food Chemistry	73	..	1(b)	..	3(b)	204
History of Chemistry	74	..	1	..	..	205
Summer Essay	134	..	..	..	..	194

†Military Engineering (400) is alternative with Engineering Law (175) and Hydraulics (101). (a) Inorganic alternative. (b) Organic alternative.

*Students taking subject No. 295 may withdraw from this work at the conclusion of the first term.

IV. CIVIL ENGINEERING.

The courses of study are designed to emphasize the fundamental principles embodied in the study of Mechanics, Strength of Materials, and Hydraulics, while at the same time affording an opportunity of applying these principles to practical problems ranging over as wide a portion as possible of the field covered by the practice of civil engineers. A broad and sound foundation is thus laid for future specialization, either in graduate courses or in actual practice. The outlook of the student is further broadened by courses in Mechanical and Electrical Engineering. In the designing courses special attention is given to the interpretation and critical discussion of specifications as well as to the economical principles involved. Students are recommended to obtain as much practical experience as possible during the summer vacations, and are specially recommended to spend at least one season in a drafting office before the final year.

FIRST AND SECOND YEARS.

As in other Engineering Courses. For details, see pages 172 and 173.

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Eng. Economics	171	..	2	..	..	218
Foundations	89	..	1	..	1	207
Geology, General	141	2	2	⅓	⅓	216
Hydraulics	97	2	..	..	..	208
Hydraulic Laboratory	98	..	..	1	..	208
Map Projections	351	..	..	1	..	236
Mechanical Engineering	226	2	2	..	..	221
Mech. Eng. Lab	228	..	..	1	1	222
Mechanics	86	2	..	..	..	207
Railway Engineering	92	2	2	..	..	208
Railway Eng	93	..	..	2	2	208
Strength of Mats. and Lab	87, 88	2	2	..	1	207
Structural Design	90	..	1	..	1	208
Surveying	353	2	2	..	..	236
*Surveying Fieldwork	354	..	..	..	..	236
Summer Reading or Essay	133	..	..	..	..	193

‡FOURTH YEAR.

Bridge Design	96	2	2	2	2	209
Elements of Elect. Eng	111	2	2	..	..	213
Electrical Eng. Lab	112	..	..	1	1	213
†Engineering Law (alt.)	175	1	1	..	..	218
Geodesy	359	2	..	..	..	237
Geodetic Laboratory	360	..	..	1	..	237
*Geodetic Fieldwork	361	..	..	..	..	237
Hydraulics	97	2	..	..	..	208
Hydraulic Laboratory	98	..	..	1	..	208
†Hydraulic Mach. (alt.)	99	..	2	..	..	209
†Military Eng. (alt.)	400	2	2	..	1	300
†Municipal Eng. (alt.)	100	..	2	..	..	210
Railway Engineering	102	2	..	..	..	211
Strength of Materials	95	2	1	..	1	209
Theory of Structures	94	1	2	1	2	209
Summer Essay	134	..	..	..	..	194

†Military Engineering (400) is alternative with Engineering Law (175) and Municipal Engineering (100) *or* Hydraulic Machines (99).

*For Surveying Fieldwork (354) and Geodetic Fieldwork (361), see details of Summer Schools, pages 236 and 237.

‡This Schedule will be modified after the Session 1918-19.

V. ELECTRICAL ENGINEERING.

The electrical studies of the third year embrace a consideration of current flow; the principles of electro-magnetism; electrical measurements; the design and performance of electrical machinery.

The fourth year is devoted principally to electrical work, and includes lectures and laboratory work on variable and alternating current phenomena, the principles of action and the design of electrical machinery, electric lighting and systems of power distribution, central station design and operation, urban and interurban railways, hydro-electric power development, electro-chemistry, electro-metallurgy and wireless telegraphy.

Occasional visits are made to electrical works and power plants.

FIRST AND SECOND YEARS.

As in other Engineering Courses. For details, see pages 172 and 173.

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Electrical Engineering	113	2	2	..	..	213
Electrical Engin. Lab	114	1	1	2⅔	2⅔	213
Calculus	201	1	1	..	..	219
Machine Design	225	2	2	..	..	221
Mechanical Drawing	232	..	..	1	1	223
Mech. Eng. and Lab	223, 226	2	2	2	1	221
Mechanics	86	2	..	..	..	207
Mech. of Machines	224	2	2	⅓	⅓	221
Physics	320	1	1	..	..	235
Physics Lab	321	..	..	2	2	235
Strength of Mats. and Lab	87, 88	2	2	..	1	207
Sum. Sch. Mech. Draw	230	..	..	..	..	223
Sum. Sch. Shopwork	233, 234	..	..	..	..	223
Summer Sch. Physics	317	..	..	..	..	235
Sum. Reading or Essay	133	..	..	..	..	193

FOURTH YEAR.

Applied Elec. Chem	70	2	..	..	..	205
Electrical Photometry and Illumination	124	2	..	⅔	..	215
Applications of Electricity	123	..	2	..	⅔	215
Electro-Metallurgy	275	..	2	..	..	229
†Electrical Designing	122	2	2	1	1	214
Electrical Engineering	117	3	3	..	..	214
Elec. Eng. Lab	118	..	..	3	3	214
Elect. Light and Power Dist.	120	2	..	..	..	214
Electric Traction	121	..	2	..	..	214
†Engineering Law (alt.)	175	1	1	..	..	218
Hydraulics	97	2	..	..	..	208
Hydraulics Lab	98	..	..	1	..	208
Machine Design	243	2	..	..	..	224
†Military Engin (alt.)	400	2	2	..	1	300
Thermodynamics	229	2	2	..	..	222
Summer Essay	134	..	..	..	..	194

†Military Engineering (400) is alternative with Engineering Law (175) and one lecture hour per week of Electrical Design (122).

For summer schools, see page 192.

VI. MECHANICAL ENGINEERING.

The subjects of instruction in this Department are of interest to students who are likely to take up work connected with—

(*a*) The constructive or manufacturing side of mechanical engineering, including industrial or production engineering; (*b*) steam engineering; (*c*) gas engine and producer work; (*d*) power plant engineering; (*e*) heating and ventilation of buildings and factories; (*f*) locomotive engineering; (*g*) marine engineering and ship propulsion.

Courses are given during the third and fourth years in mechanical engineering as applied to questions connected with power installations and prime movers. The earlier portion of this work is supplementary to the instruction given in thermodynamics, mechanics of machines and machine design, and leads up to the more advanced or technical subjects of power plant design, industrial plant design, works organization, locomotive engineering and marine engineering.

Students in the Department of Mechanical Engineering take systematic work in electrical engineering during the third year.

Instruction in workshop practice is given in each of the four years. This work is of a systematic nature, and is intended to prepare for, but by no means to replace, that practical experience of manufacturing operations on a commercial basis which every mechanical engineer must obtain for himself.

The course in thermodynamics deals more particularly with the theory of heat engines, and time is assigned for additional graphical and experimental work in connection with the subject.

Arrangements are made for occasional visits to power plants and manufactories of importance.

FIRST AND SECOND YEARS.

As in other Engineering Courses (see pages 172 and 173), with additional course in September for second year (page 192).

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Eng. Economics	171	..	2	..	..	218
Elements of Elect. Eng.	111	2	2	..	..	213
Elect. Eng. Lab	112	..	..	1	1	213
Machine Design	225	2	2	..	..	223
Mechanical Drawing	231	..	..	2	1	223
Mechanical Eng. and Lab.	227, 228	3	3	1	1	222
Mechanics	86	2	..	..	..	207
Mechanics of Machines	224	2	2	⅓	⅓	221
Shopwork	235, 236	..	..	1	1	223
Shop Processes and Management	237	1	1	..	..	224
Strength of Mats. and Lab	87, 88	2	2	..	1	207
Structural Design	90	..	1	..	1	208
Thermodynamics	229	2	2	..	..	222
Sum. Sch. Mech. Draw	230	..	..	..	..	223
Sum. Sch. Shopwork	233, 234	..	..	..	..	223
Sum. Sch. Physics	317	..	..	..	..	235
Sum. Reading or Essay	133	..	..	..	..	193

FOURTH YEAR.

Designing	241	..	..	1	1	224
†Engineering Law (alt.)	175	1	1	..	..	218
Experimental Eng	257	1	1	..	..	225
Hydraulics and Lab	97, 98	2	..	1	..	208
**Hydraulic Mach. (alt.)	99	..	2	..	..	208
**Man. Plant Des. (alt.)	253	..	2	..	1	226
Machine Design	242	2	2	..	..	224
Power Plant Design	244	1	1	1	1	224
*Heat. and Vent. of Buildings	247	1	1	..	..	225
*Locom. Eng	245	1	1	..	..	225
*Marine Engineering	246	1	1	..	..	225
Mech. Eng. Lab	249	..	..	3½	3½	225
Mech. of Mach	240	2	2	⅓	⅓	224
†Military Eng. (alt.)	400	2	2	..	1	300
Works Organization and Accounting	254	1	1	..	..	226
Shopwork	252	..	..	1	1	226
Thermodynamics	251	2	2	..	..	225
Summer Essay	134	..	..	..	..	194

*One of the three subjects must be taken.

**One of the subjects, 253 *or* 99, must be taken unless Military Eng. (400) is chosen.

†Military Engineering (400) is alternative with Engineering Law (175) and Hydraulic Machinery (99) *or* Man. Plant Design (253).

VII. METALLURGICAL ENGINEERING.

This course is designed for students intending to enter metallurgical works, such as iron or steel works or smelters. It includes instruction in the engineering, chemical, metallurgical and ore-dressing studies required by practising metallurgists.

A certain amount of mining is included in the third year curriculum in order to show the relation between mining and metallurgy; but the course is not intended for students wishing to become mining engineers.

Students who wish to specialize on the chemical side of metallurgy are recommended to select Course VIII.

In the third year of the Metallurgical Engineering Course instruction is given in chemistry, assaying, geology, mineralogy, metallurgy, mining, ore-dressing, and mechanical, structural, and business engineering.

After the third year there is a summer school in metallurgical works.

In the fourth year instruction is given in chemistry, electrical engineering, law, hydraulics, metallurgy and ore-dressing. Metallurgical designing and laboratory work form important parts of the course.

FIRST AND SECOND YEARS.

As in other Engineering Courses. For details, see pages 172 and 173.

Before the third year there is a four weeks' summer school in qualitative analysis in the chemical laboratory, beginning about the first of September.

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Engineering Economics	171	..	2	..	..	218
Fire Assaying	263	1	..	2	..	227
Geology, General	141	2	2	½	½	216
Gen. Element. Metall	261	2	..	..	½	227
Inorg. Quant. Anal. and Lab.	61, 62	1	..	1	1	203
Mech. Eng. and Lab	226, 228	2	2	1	1	221
Metall. Calculations	265	1	1	..	..	228
Metall. Colloquium	266	1	1	..	..	228
Metallurgical Lab	262	..	..	..	1½	227
Mineralogy	142, 143	2	2	2	..	216
Mining Engineering	291	..	2	..	..	230
Ore Dressing and Lab	292	2	2	..	½	230
Strength of Mats. and Lab.	87, 88	2	2	..	1	207
Structural Design	90	..	1	..	1	208
Summer School Inorg. Qual. Anal. and Lab	54, 55	..	..	..	..	202
Sum. Reading or Essay	133	..	..	..	..	193

FOURTH YEAR.

Elem. Elect. Eng. and Lab.	111, 112	2	2	1	1	213
Electro-Metal. and Lab	275, 276	..	2	..	1	229
†Engineering Law (alt.)	175	1	1	..	..	218
General Metallurgy	271	2	2	..	..	228
Hydraulics	101	1	..	½	..	210
Industrial Chemistry, Inorg.	68	2	..	..	..	205
Inorganic Quant. Anal.	67	..	1	4	..	204
†Metallurgy	272	3	3	..	..	228
Metallurgy Colloquium	277	1	1	..	..	229
†Metall. Lab	274	..	..	½	3	229
Metall. Mach. and Design	278	..	..	..	2	229
†Military Engin. (alt.)	400	2	2	..	1	300
Ore Dressing	299, 300	2	..	1	..	231
Ore Deposits	148	..	4	..	..	217
*Sum. Sch. Metal. Works	267	..	..	..	..	228
Summer Essay	134	..	..	..	..	194

†Military Engineering (400) is alternative with Engineering Law (175) and one hour per week in Metallurgy (272) and one-half period first term Metal Lab. (274).

*Metallurgical summer school (267) is taken at the end of the third year.

For summer schools see page 192.

VIII. METALLURGY.

This course is designed for students who intend to devote their attention mainly to the chemical side of metallurgy with the object of becoming analytical or consulting metallurgical chemists. The first two years are the same as in the Chemistry Course. In the third and fourth years instruction is given in analytical chemistry and assaying, theoretical, inorganic and electro-chemistry, metallurgy, mineralogy, geology, ore-dressing and mechanical engineering. Certain alternative subjects are offered in the fourth year.

FIRST YEAR.

As in other courses. For details, see page 172.

SECOND YEAR.

As in Course II, Chemistry. For details, see page 176.

Before the third year a summer school is given in metallography. This will be held in September. For details, see subject 264.

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Engineering Economics	171	..	2	..	..	218
Fire Assaying	263	1	..	2	..	227
Geology, General	141	2	2	½	½	216
Gen. Element. Metal	261	2	..	..	½	227
Inorg. Quant. Anal. and Lab.	61, 62	1	..	2	3	203
Mech. Eng. and Lab	226, 228	2	2	1	1	221
Metall. Calculations	265	1	1	..	..	228
Metall. Colloq. and Library	266	1	1	..	..	228
Metallurgical Lab	262	..	..	..	2	227
Mineralogy and Lab	142, 143	2	2	2	..	216
Ore Dressing and Lab	292	2	2	..	½	230
Physical Chemistry	58	..	2	..	..	203
Sum. Sch. Metallography	264	..	..	..	..	228
Sum. Reading or Essay	133	..	..	..	..	193

FOURTH YEAR.

Electro-Chemistry	70	2	..	..	..	205
Electro-Metall. and Lab	275, 276	..	2	..	1	229
†Engineering Law (alt.)	175	1	1	..	..	218
General Metallurgy	271	2	2	..	..	228
Industrial Chemistry, Inorg.	68	2	..	..	..	205
†Inorg. Chemistry (alt.)	72	2	2	..	..	205
Inorg. Quant. Anal.	67	..	1	3	2	204
Metallurgy	272	3	3	..	..	228
Metallurgy Colloquium	277	1	1	..	..	229
Metall. Lab	279, 274	..	..	3	2	229
Metall. Mach. and Design	278	..	..	..	2	229
†Military Engin. (alt.)	400	2	2	..	1	300
Ore Dressing and Lab	299, 300	2	..	1	..	231
†Ore Deposits and Economic Geology (alt.)	148	1	4	..	..	217
†Petrog. and Lab. (alt.)	146	1	..	..	1	216
*Sum. Sch. Metal. Works	267	..	..	..	..	228
Summer Essay	134	..	..	..	..	194

†Students taking Military Engineering (400) need not take any of the other alternative subjects 72, 146, 148 and 175.

Other students will take Engineering Law (175) and one of the subjects 72, 146 and 148, but the lectures given will be so arranged as to give these courses equal weight.

*Metallurgical summer school (267) is taken at the end of the third year.

IX. MINING ENGINEERING.

Specialization does not begin until the third year, when an elementary course in metallurgy is given and the professional courses in mining, ore-dressing and fire-assaying are begun, but the chief work is still in such fundamental science subjects as applied mechanics, chemistry, geology, mineralogy, and mechanical engineering.

The fourth year, on the other hand, is very largely given up to detailed work in mining, ore dressing, economic geology, metallurgy, and electrical engineering, and two elective alternative lines of study are offered, both including the essential subjects of the course and leading to the degree, but each permitting of a considerable amount of specialization. These alternative or sub-courses are:—(*a*) Mining Engineering and Geology; (*b*) Mining, Mechanical and Electrical Engineering.

In both cases the fourth year work includes the equivalent of at least two full days per week in the laboratories and drafting room of the mining department, and in the second term each student is required to prepare a thesis giving the result of an extended individual experimental investigation.

A field school in mining, ore-dressing and geology is held between the third and fourth years, the work ordinarily beginning immediately after the close of the April examinations. From four to six weeks are spent in travel, during which a number of mines and concentrators are visited and critically studied under the direction of the departmental staff.

Facilities are also afforded in he department to graduate students who wish to do advanced work in nining or ore-dressing.

FIRST AND SECOND YEARS.

As in other Engineering Courses. For details, see pages 172 and 173.

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Engineering Economics	171	..	2	..	..	218
Fire Assaying	263	1	..	2	..	227
Geology, General	141	2	2	½	½	216
Inorg. Qual. Anal. and Lab.	59, 60	1	..	..	2	203
Mine Mapping	293	..	..	1	..	230
Mech. Eng. and Lab.	226, 228	2	2	1	1	221
Gen. Element. Metall.	261	2	..	..	½	227
Mineralogy	142	2	2	..	..	216
Mineralogy, Determinative	143	..	..	2	..	216
Mining Engineering	291	..	2	..	..	230
Ore Dressing and Lab.	292	2	2	..	½	230
Strength of Mats. and Lab.	87, 88	2	2	..	1	207
Struct. Design	90	..	1	..	1	208
Surveying	352	2	..	..	..	236
Surveying Field Work	354	..	..	..	..	236
Sum. Reading or Essay	133	..	..	..	..	193

FOURTH YEAR.

Elem. of Elec. Eng. and Lab.	111, 112	2	2	1	1§	213
†Engineering Law (alt.)	175	1†	1†	..	..	218
Geology of Canada	149	1	..	..	..	217
*Geology, Historical	152	1*	1*	..	1*	217
Hydraulics	101	1	..	½	..	210
Metallurgy, General	271	2	2	..	..	228
†Military Eng. (alt.)	400	2†	2†	..	1†	300
Mineral Analysis	71	..	..	4	..	205
Mining Engineering	297	3	3	..	..	230
Mining Mach. (alt.)	298	1†	1* or 2§	..	2	231
Mining Colloquium	302	..	1	..	..	231
Ore Dep. and Econ. Geol.	148	1	4†	..	..	217
Ore Dressing and Milling	299	2	..	..	..	231
Ore Dress. Lab. (alt.)	300	..	..	½* or 1½§	..	231
Ore Dress. Lab. and Thesis	301	..	..	..	3	231
Petrography and Lab.	146	1	..	..	1	216
*Petrography Advanced	147	..	..	1*	..	216
Mining Field School	294	..	..	..	..	223
*Field Geology	154	..	..	..	..	217
Summer Essay	134	..	..	..	..	194

†Military Engineering (400) is alternative with Engineering Law (175) and Mining Machinery (298), 12 lectures, and Ore Deposits (148), 12 lectures.

*For students taking the Mining Geology Alternative Course only.

§For students taking the Mining Engineering Alternative Course only.

NOTE:—Mining Field work at end of third year. See page 233.

Surveying Field Work, beginning Sept. 2nd, 1918. See pages 192 and 236.

SUMMER SCHOOLS.

Undergraduates are required to attend Summer Sessions as specified below. The work is set forth in detail under the subject numbers referred to.

Except as noted Classes will begin on September 2nd, and will close on September 27th, 1918.

COURSE	Students entering Second Year		Students entering Third Year		Students entering Fourth Year	
	Subject No.	Page	Subject No.	Page	Subject No.	Page
Architecture	347	236	...	...	...	...
Chemistry	...	236	263, 264	227	...	...
Chemical Engineering	347	236	54, 55	202	...	...
Civil Engineering	347	236	354	236	361	237
Elect. Engineering	347	236	230, 233, 234, 317	223, 235	...	...
Mechanical Engineering	347	236	230, 233	223	...	...
			234, 317	223, 235	...	...
Metallurgical Eng	347	236	54, 55	202	*267	228
Metallurgy	...	236	264	228	*267	228
Mining Engineering (alt.) a	347	236	354	236	†154	217
					*294	233
Mining Engineering (alt.) b	347	236	354	236	*294	233

*These schools are held during the month of May.

†This school is held in the ten days just preceding the beginning of the first term.

SUMMER ESSAYS AND SUMMER READING.

Session 1918-19.

For Students Entering the Second Year.

132. All students entering the second year, except those in the Course in Architecture (see below), will be required to read the following English classics:—*

Southey—"Life of Nelson."
Parkman—"Montcalm and Wolfe."
Kingsley—"Hereward the Wake."
Dickens—"David Copperfield."
George Eliot—"Adam Bede."

48. Students in the course in Architecture must read the following books:—

Sturgis, Russel—"How to Judge Architecture."
Lytton, Edward Bulwer—"Last Days of Pompeii."

Students in the course in Architecture must also either spend five weeks in the office of an architect or contractor, or prepare thirty-five reasonably large freehand sketches in any desired medium.

All students will be required to pass an examination in the summer reading at the opening of the session. A maximum of 100 marks will be allowed for this reading.

For Students Entering the Third Year.

133. Students entering the third year, except those in the course in Architecture (see below), must either

(a) Follow a course of summer reading, *or*
(b) Prepare an essay.

(a) The summer reading required is Shadwell's "Industrial Efficiency" (Longmans, Green & Co., 1913), on which an examination will be held at the opening of the session. The same number of marks are allotted for this reading as for the essay.

(b) The essay must in all respects follow the specifications laid down for essays submitted by students entering the fourth year, except that it may be shorter. All rules and regulations governing the fourth year essays, as set forth below, also apply to the third year essays. (See section 134.)

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* These books are published in Everyman's Library (Dent).

Students in Electrical Engineering, or Mechanical Engineering, electing to write an essay and who are not engaged during the summer on any engineering, scientific or industrial work which would afford a subject for an essay, may write on one of the following subjects:—

Electrical Engineering Students.

(1) The Application of Electric Power to Industrial Establishments.
(2) Relation between Fundamental, Electrical and Mechanical Units.

Mechanical Engineering Students.

(1) Feed-water Heating.
(2) Power House Piping.
(3) Machine Tool Drives.

Students in Mining Engineering who are for any reason unable to write on some engineering work of which they have personal knowledge will be required to take the summer reading (a).

48. Students in the course in Architecture are not permitted to submit an essay, but must read the following books:

Santayana, G.—"The Sense of Beauty," N.Y., 1896.

"Chronicles of the Crusades," De Joinville. (Everyman's Library, Dent.)

Students in the course in Architecture must either spend five weeks in the office of an architect or contractor, or prepare thirty-five reasonably large freehand sketches in any desired medium.

For Students Entering the Fourth Year.

134. Students entering the fourth year, except those in the course in Architecture (see below), are required to prepare an essay during the summer, to be handed in at the Dean's Office *not later than 5 p.m. on Thursday, October 10th.* A maximum of 100 marks, or nearly 10 per cent. of the total marks for the year, is given for these essays.

The essays should be from 2,000 to 5,000 words in length. They should be illustrated by drawings, sketches, and (when desirable) by photographs, specimens, etc.

The essays must be well expressed, and written in precise, well chosen, grammatical English. Advantage may be taken of any source of information in the preparation of the essays, but due acknowledg-

ment must always be made of all the authorities and books which have been consulted. In judging of the value of the essays, account will be taken not only of the subject matter, but also of style and literary construction.

All essays when handed in will become the property of the department concerned, and will be filed for reference. Students may submit duplicate copies of their essays in competition for the students' prizes of the Canadian Society of Civil Engineers, or of the Canadian Mining Institute.

The essays must be written on paper of substantial quality and of a size approximately 8½ x 11 inches.

The *most acceptable subject for an essay* is a critical description of the work on which the student is engaged during the summer, but a description of any engineering, scientific or industrial work with which he is familiar will be accepted.

Except as noted in the following paragraph no essay compiled from books alone will be accepted, unless the student has obtained in advance the permission of the head of his department to prepare such an essay.

Students in Electrical Engineering, or Mechanical Engineering, who have not been engaged on any suitable work, may write on one of the following subjects:—

Electrical Engineering Students.

(1) Long Distance Power Transmission.
(2) Variable Speed Drives for Machine Tools.
(3) The Substitution of Electricity for Steam on Railroads.

Mechanical Engineering Students.

(1) Power Gas Producers.
(2) Central Station Heating.
(3) Ball and Roller Bearings.

48. Students in the course in Architecture are not permitted to submit an essay, but must read the following books:

Santayana, G.—The Sense of Beauty," N.Y., 1896.

"Chronicles of the Crusades," De Joinville. (Everyman's Library, Dent.)

They will be required to pass an examination on this reading at the opening of the session. A maximum of 100 marks will be allowed for the work.

In addition to this reading, students in the course in Architecture must either spend five weeks in the office of an architect or contractor, or prepare thirty-five reasonably large freehand sketches in any desired medium.

SUBJECTS OF INSTRUCTION.

The following courses are subject to such modifications during the year as the Faculty may deem advisable.

DEPARTMENT OF ARCHITECTURE.

PROFESSORS:— { RAMSAY TRAQUAIR (in charge of Department).
{ PERCY E. NOBBS. (On military service, overseas.)

ACTING ASSISTANT PROFESSOR:—PHILIP J. TURNER.

LECTURER:—H. M. LAMB.

INSTRUCTOR:—H. HÉBERT.

DEMONSTRATOR:— ————————

A.—Design.

Students register for second, third, fourth or fifth year Design according to their year in the University. They are graded for purposes of instruction into grades A, B, C and D, and are promoted in these grades according to ability. All students before receiving the degree must pass fifth year Design and qualify in grade D.

1. GRADE A. Simple problems in monumental composition, not involving complex planning.

2. GRADE B. Designs for single buildings devoted to one object.

3. GRADE C. Problems involving more complicated planning and grouping.

4. GRADE D. Advanced Planning. The grouping of parts and the disposition of groups of buildings. The diploma design for graduation is executed in the second term of the fourth year in this grade. Prof. Traquair, Prof. Nobbs and Mr. Turner.

B.—Aesthetic.

The theoretical courses that follow are intended to develop a sense of critical judgment in the student, and to emphasize the fundamental principles of composition and design.

5. THE ELEMENTS OF ARCHITECTURE (24 lectures).

The five orders of Vignola, pedestals, pediments, intercolumination and superposition of orders, arches, vaults, domes, roofs, openings, walls, and stairs. Mr. Turner.

6. THE ELEMENTS OF COMPOSITION (24 lectures).

Analogies in the arts, proportion, scale, expression, decoration, massing, unity, symmetric and asymmetric grouping, individuality, horizontality and verticality. General rules of composition in plan;

architectural acoustics and the æsthetic properties of materials. Mr. Turner.

Reference Book:—Eléments et théorie de l'Architecture, Gaudet.

7. THEORY OF DESIGN (24 lectures).

(a) *Aesthetic Practice*:—Pure design; the function of ornament; the moral logic of ornamental motif; the material logic of ornamental treatment; evolution of form; the placing of ornament; classification of significant ornament; (b) *Aesthetic Theory*:—The history of æsthetic enquiry; the phenomena of perception, pleasure, pain, and expression; the art impulse, and the relation of beauty to the arts; subject, emotional content and medium in works of art; the criteria of excellence. Prof. Nobbs.

Books:—The Mistress Art, Bloomfield; The Fine Arts, Baldwin Brown.

8. THEORY OF PLANNING (24 lectures).

(a) *Elements of Planning*:—The relation of planning to external compositions; dimensions and arrangements, scale, aspect and prospect; (*b*) *Domestic Buildings*:—Residential architecture of all types, stables, garages, etc.; (*c*) *Ecclesiastical Art*:—Church plans in relation to the service; (*d*) *Special Types*:—Fire stations, baths, hospitals, schools, factories, libraries, etc.; (*e*) *Public Buildings*:—Town halls, municipal buildings, court houses, Parliament buildings, large halls. Prof. Nobbs.

Text-books:—The Principles of Planning Buildings, Marks.

ORNAMENT AND DECORATION (48 lectures and 48 drafting periods), 9, 10, 11 and 12.

9. DECORATIVE HERALDRY. The place of heraldry in the arts; the laws of heraldry, heraldic art of different periods; modern practice and tendencies. Prof. Traquair.

Text-book:—Decorative Heraldry, Eve. *Reference*:—The Art of Heraldry, Fox-Davies.

10. ORNAMENT IN FORM. Plaster work, terra cotta, stone carving, architectural sculpture, wood carving and furniture design are dealt with from the point of view of the evolution of form in distinctive materials influenced incidentally by the prevailing tastes of different periods. Prof. Traquair.

Reference Books:—Plastering, Plain and Decorative, Millar; The Art of the Plasterer, Bankart; Mediæval Figure Sculpture in England, Prior.

11. METAL WORK. Wrought iron, cast iron and bronze, beaten work in copper, brass and silver are dealt with technically and historically. Prof. Traquair.

Reference Books:—English and Scottish Wrought Iron Work, Murphy; Ironwork, Starkie Gardner; Leadwork, Lethaby.

12. Colour Decoration. Stained glass, mosaic of various kinds, inlays, the use of coloured materials in external and internal design, mural decoration, and the analysis and construction of pattern. Prof. Traquair.

Reference Books:—Vitraux, Merson; Windows, Day.

C.—Archæology.

13. General History. Mediæval and Modern Europe (50 lectures).

For particulars of the course, which constitutes the second year history course in the Faculty of Arts, see page 130. Prof. Fryer.

14. Ancient and Classic Architecture (48 lectures).

The architecture of the ancient Egyptians, Chaldæans, Assyrians and Persians; the Minoan civilization; architecture of the Dorian and Ionian Greeks, with special attention to the refinement of form in Hellenic art; the architecture of Rome and Byzantium to the fall of the Byzantine Empire. Prof. Traquair.

15. Mediaeval Architecture (48 lectures).

The rise of the Romanesque schools, from the decline of the Western Roman Empire to the XI century; the evolution of ecclesiastical architecture in France and England to 1500 A.D.; the Gothic schools of Europe and the evolution of military and civil architecture. Prof. Traquair.

16. Renaissance Architecture (48 lectures).

The beginning of the Renaissance in Italy and its influence on architecture from 1400 A.D. to 1600 A.D.; the Renaissance in France from Francis I to the Revolution; the earlier and later phases of the Renaissance in England and English architecture during the XVIII century. Prof. Traquair.

17. Modern Architecture (48 lectures).

The Gothic revival in England; the influence of Pugin, Ruskin and Morris and the Preraphaelites; the Arts and Crafts movement; the eclectic schools; Shaw and the Free-Classicists; taste in Europe during the XIX century; the classic schools and the official school; the national revivals in Russia and Germany; the Secession and the "Art Nouveau"; the colonial traditions of New England and the Spanish and French districts; the Beaux Arts influence; the English influences; the Modern School; city planning in Europe and America. Prof. Traquair.

Text-books:—Classic: The Architecture of Greece and Rome, Anderson and Spires; Mediaeval: Gothic Architecture in England, Bond; Mediæval Architecture, Power; Italian Renaissance Architecture, Anderson; French Renaissance Architecture, Ward; Early Renaissance Architecture in England, Gotch; A Short History of Renaissance Architecture in England, Bloomfield; General: A History of Architecture, Banister Fletcher; The Growth of the English House, Gotch.

D.—Science.

MATHEMATICS 191, 192, 193, 194, Algebra, Geometry, Trigonometry and Mechanics. For full particulars, see pages 218 and 219.

42 and 43. PHYSICS AND PHYSICS LABORATORY (48 lectures and 24 periods).

The instruction includes a fully illustrated course of experimental lectures on the general principles of physics, embracing the laws of energy, heat, light and sound. Prof. Eve.

346, 347 and 348. SURVEYING. (Full course: 4 weeks field school, 48 lectures and 24 draughting periods, see page 236.)

22 and 23. HYGIENE OF BUILDINGS. (24 lectures in first term, 12 lectures and working out of one graphical problem in second term.)

22. Light and air, water, sanitary plumbing, sewage disposal. First term. Dr. Starkey.

23. The heating and ventilation of buildings. Second term. Prof. McKergow.

E.—Construction.

The second year work covers the ordinary building trades and detailing where calculations of a complicated kind are not involved. The third year work deals with structural problems involving calculation, while in the fourth year problems in structural design are worked out.

24 and 25. BUILDING CONSTRUCTION AND BUILDING DETAIL (24 lectures, 48 draughting periods).

Building materials, brickwork, masonry, carpentry, roofing, etc.; joinery of doors, windows, etc., and the finishing trades, such as plastering, painting and plumbing; underpinning, shoring, centering and forms. General working drawings are prepared, and building works in progress are visited. Mr. Turner.

26 and 27. STRUCTURAL ENGINEERING I AND STRUCTURAL ENGINEERING (Draughting) I (48 lectures and 24 draughting periods).

Steel Construction:—Ores and manufacture of iron and steel; theory of beams, cases of loading; designing, detailing and shop work

of beams; *Columns*:—theory, calculations, eccentric loads; single-sections and built-up steel columns; cast iron columns, beam box girders, plate girders, calculation; steel frame work for buildings; specifications for and inspection of structural steel work; wind bracing and fire-proofing; *Foundations*:—Soils, beds, timber and concrete piles pile driving and pile driving machinery; foundations on compressive soils; concrete footings, timber spread footings, steel spread footings; masonry footings; loads on buildings; strength of masonry, stability of buildings. Mr. Lamb.

28 and 29. STRUCTURAL ENGINEERING II AND STRUCTURAL ENGINEERING (Draughting) II (24 lectures and 48 draughting periods).

Structural Engineering II.—Analysis of stresses in trusses, graphical statics; design of roof trusses and mill-building; theory and practice of reinforced concrete building construction, including floor-slabs, beams, girders and columns; foundations and retaining walls; theory of masonry arches. Mr. Lamb.

F.—Architectural Practice.

131. ENGLISH COMPOSITION (24 lectures with exercises).

Instruction is provided with the Applied Science first year classes. (See page 215). Mr. Latham.

30. PROFESSIONAL PRACTICE (24 lectures with exercises).

Structure of specifications and general clauses; specifications for all trades; conditions of contract; agreements; building by-laws; estimates, reports, professional ethics. Mr. Turner.

175 ENGINEERING LAW (24 lectures).

Instruction is provided with the Applied Science fourth year classes (see page 218).

G.—Drawing.

31, 32, 33 and 34. ARCHITECTURAL DRAWING (84 periods of three and four hours).

The work in this course is in direct connection with the lectures in archæology.

31. Drawings of the Classic orders are prepared direct from the large models in the museum, and arch, vault, dome and roof diagrams are also prepared from documents. Mr. Turner.

32. Drawings of the Greek orders are prepared with special reference to their structural development and design. Restorations of classic buildings are prepared from the documents in the reference room.

33. Examples of mediæval architecture are studied; sketch plans and elevations of important works are set up, and detail drawings are prepared from documents.

34. A special study is made during the first term of Italian Renaissance examples; the XVI century architecture of France and England and late examples of French or English fully developed Classic are studied. Prof. Traquair and Mr. Turner.

35. HISTORICAL DRAWING. The advanced study of one or more buildings of an historical style by means of large scale drawings.

36, 37, 38, 39. FREEHAND DRAWING (48 periods).

Drawing in pencil or charcoal from casts of architectural ornament, architectural fragments and parts of the figure. Mr. Turner and Mr. Hébert.

18. ARCHITECTURAL GEOMETRY (24 lectures and 24 periods)

Geometrical drawing and descriptive geometry, shades and shadows in their application to architectural forms and the intersections of geometrical solids. Mr. Turner.

19. PERSPECTIVE (24 periods with occasional explanatory lectures).

The elements of rectilinear perspective and the practical application of the precepts in making perspective drawings of the design problems in hand. Mr. Turner.

40 and 41. MODELLING (one period a week of two hours, extended over the fourth and fifth years).

The student first studies form directly from nature, and later on conventionalizes the forms with which he has become familiar for decorative purposes. The Architectural museum affords many examples from different periods of the adaptation and abstraction of natural motifs in ornament. They are used to show the spirit in which to work out ornament, and are not copied directly. Models of design on which the students are engaged are also prepared, and casting is taught. Mr. Hébert.

44, 45, 46, 47. An essay on an historical or theoretical subject is required from all students excepting those of the first year. This essay is to be prepared during the session.

48. SUMMER WORK.

During the vacation following the close of the first, second and third years, the students in Architecture are required to read and be prepared to pass an examination on a selected theoretical, æsthetical, or historical architectural work, and in addition to this, to spend at least five weeks in the office of some architect or contractor; the period of such employment to be certified by a letter from the employer. For the students who for any reason find it impracticable to do office work, the substitution of thirty-five reasonably large freehand sketches, rendered in any desired medium, will be considered an equivalent.

For summer reading, see page 193.

DEPARTMENT OF CHEMISTRY.

PROFESSOR:—R. F. RUTTAN.

ASSOCIATE PROFESSORS:— NEVIL NORTON EVANS. F. M. G. JOHNSON. V. J. HARDING.

ASSISTANT PROFESSORS:— V. K. KRIEBLE. F. W. SKIRROW.

LECTURERS:— A. R. M. MCLEAN. OTTO MAASS.

DEMONSTRATORS:— G. S. WHITBY. E. G. YOUNG. O. W. HERZBERG. JOHN RUSSELL. W. A. WIELAND.

Second Year Lectures.

51. (See also 75.) GENERAL CHEMISTRY. The course includes the history, properties, methods of preparation of the most important elements and compounds, with their industrial applications; classification; general laws and principles; and the fundamental theories of the science. Three hours a week for all students in Engineering. Professor Evans.

Text-book:—Macpherson and Henderson, General Chemistry.

54. INORGANIC QUALITATIVE ANALYSIS. A course dealing with the principles of analytical chemistry—nature of solutions, precipitation, etc., explanatory of the work done in the laboratory (course 55). One lecture a week in the second term, or five lectures a week for the first three weeks of the summer session. Professor Evans and Mr. Herzberg.

Text-book:—W. A. Noyes' Qualitative Analysis. *Reference*:—Stieglitz, Qualitative Chemical Analysis.

Second Year Laboratory.

52. GENERAL CHEMISTRY LABORATORY. Practical work designed to accompany and illustrate the lectures of course 51. The course includes the construction and use of ordinary apparatus, the preparation and study of important elements and compounds, qualitative analysis, and simple quantitative determinations, both gravimetric and volumetric, including combining weights, standardisation of solutions, hardness of water, etc. One period for all students of Engineering. Professor Evans, Mr. Wieland and Mr. Russell.

53. GENERAL CHEMISTRY LABORATORY. A course similar to number 52, but more extensive, and including the preparation and purification of inorganic chemicals. Four periods a week in the first term for students of the Chemistry and Metallurgy Courses. Professor Evans and Mr. Wieland.

55. Inorganic Qualitative Analysis Laboratory. An extended course. Four periods a week in the second term, for students of the Chemistry and Metallurgy Courses; or equivalent time in the Summer School for students of the Chemical and Metallurgical Engineering Courses. Professor Evans and Mr. Wieland.

Text-book:—W. A. Noyes' Qualitative Analysis.

Third Year Lectures.

56. Organic Chemistry. A course in general elementary organic chemistry. Three lectures a week during the first term and two during the second term. Drs. Ruttan and Krieble.

Text-book:—Perkin and Kipping's *or* Remsen's Organic Chemistry.

58. Physical Chemistry. An introductory course following the development of chemical theory, including vapour densities, molecular weights, the mass law and the phase rule.

Two lectures a week during the first term. Dr. Johnson and Mr. Maass.

Text-book:—Theoretical and Physical Chemistry, Bigelow.

59. Inorganic Qualitative Analysis. A course explanatory of the work done in the laboratory. One lecture a week in the second term for Mining Engineers only. Professor Evans.

Text-book:—W. A. Noyes' Qualitative Chemical Analysis.

61. Inorganic Quantitative Analysis. A course on the general principles involved in quantitative analysis. One lecture a week during the first tern of the third year. Dr. Skirrow.

Text-book:—Cumming and Kay. *For Reference*:—Treadwell's Quantitative Analysis.

Third Year Laboratory.

57. Organic Chemistry. A course on the preparation, detection and analysis of the commoner organic compounds. Two periods a week in the second term. Dr. McLean and Mr. Whitby.

Text-Book:—Gattermann's Organic Preparations.

60. Inorganic Qualitative Analysis. A course adapted to the requirements of Mining Engineers. Two periods a week in the second term. Mr. Herzberg.

62. (See also 76.) Inorganic Quantitative Analysis. An extensive course on gravimetric and volumetric methods. Three periods per week for Chemical Engineers (Course III.). Dr. Skirrow and Mr. Russell.

Text-book:—Cunningham and Kay, Quantitative Analysis.

Fourth Year Lectures and Laboratory.

73. Biological and Food Chemistry. A course on the constitution and analysis of proteins, carbohydrates, fats and allied substance. The course also includes the estimation of food values, enzyme action and colloidal chemistry. A course of one lecture per week and three laboratory periods during the second term. Dr. Ruttan and Dr. Krieble.

Text-book:—Leach, Food Inspection and Analysis.

64. Advanced Organic Chemistry. During the autumn term the course comprises the development of general theoretical organic chemistry, and a series of special lectures on the carbohydrates and the terpenes.

The winter term is devoted to the organic chemistry of nitrogen, including the proteins, purins, alkaloids, etc. Drs. Ruttan and Harding.

Text-book:—Perkin and Kipping's Organic Chemistry. *For reference*:—Recent Advances in Organic Chemistry, Stewart; Advanced Organic Chemistry, Cohen; Organic Chemistry of Nitrogen, Sidgewick.

65. Advanced Organic Laboratory. This course includes the application of the important general organic reactions, quantitative organic determinations, a study of the improvement in conditions of reaction and the preparation of some typical organic dyes and synthetic drugs. Drs. Krieble and MacLean.

The student is required during this course to take a complete course in gas analysis under Dr. Skirrow.

66. Physical Chemistry. Two lectures a week on general physical chemistry, including the kinetic theory, thermo-chemistry, electron theory in chemistry, chemistry of radioactive substances, etc.

Students will be required to work problems dealing with the subject matter of the lectures.

Two laboratory periods a week in the first term are devoted to typical physico-chemical measurements. One laboratory period a week during the second term is devoted to physical chemical methods of analysis. Mr. Maass.

Text-books:—Nernsts' Theoretical Chemistry; Findlay's Physico Chemical Measurements.

For Reference:—Ramsay's Text-books of Physical Chemistry.

67. (See also 77.) Inorganic Laboratory. The lectures deal with the special methods of analysis of iron and steel, alloys, gas and water. One lecture and four periods a week in the first term and five periods in the second. For Chemical Engineering students. Dr. Skirrow and Mr. Russell.

The laboratory work is a continuation of courses 61 and 62 and is adapted both in extent and in subject matter to the needs of indi-

vidual students, various other courses being allowed as partial alternatives.

For reference:—Lord and Demorest; Treadwell's Quantitative Analysis; Blair, Chemical Analysis of Iron; Brearley and Ibbotson, Analysis of Steel Works Materials.

68. INDUSTRIAL CHEMISTRY, INORGANIC. A course, both theoretical and descriptive, on the more important inorganic chemical industries. Special lectures are given by chemical engineers from outside the University during the first term, and visits to works are made during the session. Professor Evans.

69. INDUSTRIAL CHEMISTRY, ORGANIC. This course is given during the second half of the session, and includes the chemistry of paper and pulp, sugar, starch and glucose, soap and fats, distillation of wood and the purification of the products, etc. This course is given by Dr. Ruttan, with special lectures by several chemical engineers from the city and district who are specialists in one or other of the industries.

70. APPLIED ELECTRO-CHEMISTRY. The laws of electrolysis and of solutions are studied from the standpoint of the osmotic theory. Primary and secondary batteries, electro-plating, polarisation and the preparation and electro-chemical behaviour of the rarer elements used in incandescent lamps are discussed. The more important technical processes are studied and typical substances prepared in the laboratory. Two lectures in the first term. Dr. Johnson and Mr. Maass.

For reference:—Le Blanc, Elements of Electro-chemistry; Blount, Practical Electro-chemistry.

71. MINERAL ANALYSIS. A laboratory course specially designed for Mining Engineers. Four periods a week in the first term. Dr. Skirrow and Mr. Russell.

Text-book:—Lord and Demorest. *For reference*:—Olsen's Quantitative Analysis.

72. ADVANCED INORGANIC CHEMISTRY. A course of lectures on inorganic chemistry, discussing the elements and their compounds in accordance with the general principles of physical chemistry.

Two lectures a week throughout the session. Dr. Skirrow.

74. HISTORY OF CHEMISTRY. A short course dealing with the development of chemistry from the historical standpoint. One lecture per week in the second term. Dr. Johnson and Mr Maass.

75. GENERAL CHEMISTRY. This course is the same as that for students in Chemical Engineering (51), with one additional lecture or seminar per week. Prof. Evans.

76. Inorganic Quantitative Analysis. This course is similar to course 62, but is more extended. Six periods per week for chemists. Dr. Skirrow.

77. Inorganic Laboratory. This course is similar to course 67, but is extended to include special preparations. One lecture and six periods in the first term and seven periods in the second for chemists. Dr. Skirrow.

DEPARTMENT OF CIVIL ENGINEERING AND APPLIED MECHANICS.

Professors:— H. M. Mackay. E. Brown.

Assistant Professors:— C. Batho. H. M. Lamb. F. J. Cronk.

Lecturer:—R. de L. French.

Assistant in Charge of Testing Laboratory:—S. D. MacNab.

Demonstrators:— R. S. L. Wilson. G. J. Dodd (on military service.) _____ _____

Second Year.

81. Materials of Construction. Manufacture and properties of cast iron, wrought iron, crucible, bessemer and open hearth steel; principal alloys; considerations governing selection of materials; manufacture and properties of Portland and natural cements; limes; concrete; stone and brick masonry; principal kinds of timber used for engineering purposes; preservation of timber; discussion of standard specifications.

Required of all engineering students. One hour per week. Prof. MacKay, Mr. Werner.

82. Graphical Statics. Composition of forces; general methods involving the use of funicular and force polygons; determination of reactions, centres of gravity, bending moments and moments of resistance; stresses in cranes, braced towers, roof trusses and bridge trusses. Required of all engineering students. Three hours per week, second term. Mr. Lamb and Mr. Wilson.

83. Mechanics. The course includes the general principles of statics, and of the dynamics of a particle. Motion of a particle under varying force is considered and a knowledge of both differential and integral calculus is essential. Simple harmonic motion is considered (taking the oscillation of springs and pendulums in illustration), and numerous applications of the principles dealt with are worked out. Three lectures per week, second term. Prof. Brown and Dr. Batho.

Text-book:—Morley, Mechanics for Engineers.

Third Year.

86. MECHANICS. The work of the second year course in mechanics is extended, and the dynamical equations for the motion of a rigid body in two dimensions are deduced. Numerous examples are worked in detail, including problems on fly-wheels, kinetic energy of bodies having translation and rotation, oscillation of a rigid body about a fixed axis of impulse, suspension, etc. The elementary principles of the gyroscope are also considered. Two lectures per week, first term. Prof. Brown and Dr. Batho.

Text-book:—Morley, Mechanics for Engineers.

87. STRENGTH OF MATERIALS. This course deals with the fundamental principles of the strength of materials. It includes the following:—Stress, strain, resilience, and the elastic properties of materials used in construction; bending moment and shearing force diagrams; strength, curvature, and deflection of beams; continuous beams; cantilever beams and the like; simple problems on rolling loads; reinforced concrete beams; the strength of shafting; spiral springs; bending combined with tension or compression; elementary consideration of compound stresses; distribution of shearing stress on various sections, etc.

Required of all engineering students. Two lectures per week during session. Prof. Brown, Dr. Batho and Mr. Lamb.

Text-book:—Morley, Strength of Materials.

88. STRENGTH OF MATERIALS LABORATORY. The work is arranged to illustrate the principles of the lecture course in strength of materials (87), and includes the following:—Tension tests of various materials in 100-ton and 30-ton testing machines; determination of stress-strain diagrams by automatic recorders and by extensometers and scales; deflection of beams, wood and metal; torsion of shafts; deflection and vibration of spiral springs, and torsional oscillations of wires; the moment of inertia of fly-wheels by oscillation and falling weight tests; determination of Young's modulus for various materials; complete tests of Portland cement; efficiency of chain blocks, experiments on tension and twisting of wires; bending combined with torsion as in shafting; together with demonstrations on the large testing machines of tensile tests of various materials, the breaking of timber and reinforced concrete beams and small columns, the compressive strength of concrete, bricks, mortars, etc. Three hours per week, second term. Prof. Brown, Dr. Batho, Mr. French, Mr. Wilson.

89. FOUNDATIONS AND MASONRY. Borings; bearing power of soils; piles and pile driving; concrete piles; footings; grillages; underpinning; foundations under water; cofferdam, open dredging, pneumatic and freezing processes; estimation of quantities from drawings; estimates of cost.

Required of Civil Engineering students. Four hours per week, second term. Prof. MacKay, Mr. Lamb, Mr. Wilson.

Text-book:—Foundations of Bridges and Buildings, Jacoby and Davis.

90. STRUCTURAL DESIGN. Problems in the design of beams, plate girders, columns, roof trusses, knee bracing, etc.; working drawings; reinforced concrete; estimates of quantities; estimates of cost. Required of students in Courses III, IV, VI, VII and IX. Four hours per week, second term. Mr. Lamb and Mr. Wilson.

Reference books:—Ketchum's Structural Engineer's Handbook; Morris, Structural Design; Cambria Steel.

92. RAILWAY ENGINEERING. The locomotive and its work; locomotive and grade problems; effect of distance, rise-and-fall and curvature on train mile costs; estimate of probable receipts and expenditures; economics of location, reconnaissance, preliminary, and location surveys; turnouts; yards and terminals; details of construction; materials and construction. Required of Civil Engineering students. Two hours per week. Mr. Cronk.

93. RAILWAY ENGINEERING. The paper location of a railway, map, profile, earthwork, mass diagram, overhaul, velocity, profile, bill of material and cost estimate of same; the design of a freight yard, detailing of switches and complicated lay-outs and bill of track material. Required of Civil Engineering students. Six hours per week. Mr. Cronk.

97. HYDRAULICS. The fundamental principles of hydraulics are considered and applied to problems on the discharge of orifices, notches, weirs, pipes and open channels under varying conditions; the theory of impact of jets and its application to turbines is also dealt with. Required of Civil Engineering students in the third year and of Mechanical Engineering students of the fourth year; alternative course for Electrical students of the fourth year. Two hours per week, first term. Prof. Brown.

Text-book:—Hydraulics and its Applications, Gibson.

98. HYDRAULIC LABORATORY. The course is illustrative of the principles considered in course 97, and is taken concurrently. The work includes the following experiments:—Measurement of discharge from orifices, notches and pipes, both straight and bent, to determine hydraulic coefficients; pressure of jets impinging on vanes; tests of Venturi meter, hydraulic ram, Pelton wheel, Girard impulse turbine, Brotherhood reciprocating motor, etc. Three hours per week, first term. Prof. Brown, Dr. Batho, Mr. French.

Fourth Year.

94. THEORY OF STRUCTURES. The analysis of statically determinate framed structures under fixed and moving loads; distortion of framed structures; swing spans; braced arches and arched ribs with two and three hinges; hingeless arches in concrete and reinforced concrete; frames with redundant members.

Required of Civil Engineering students. Four hours per week, first term; eight hours per week, second term. Prof. MacKay, Mr. Lamb.

Reference books:—Johnson, Bryan and Turneaure's Modern Framed Structures; Marburg, Stresses in Structures.

95. STRENGTH OF MATERIALS. The course includes the following: The bending and deflection of beams loaded in any manner; beams continuous over several supports at the same or different levels; distribution of shear and deflection due to shear; principle of work applied to deflection of beams, trussed beams and some statically indeterminate problems; bending of curved bars, and of unsymmetrical sections such as single angles, etc.; elastic strains; relation between elastic constants; strength of thick shells; earthwork theories; suspension cables; the design of floor and column systems for reinforced concrete buildings (including a critical study of standard specifications); retaining walls, etc.

Required of Civil Engineering students. Two lectures per week during the first term, and one per week during second term, with the equivalent of one-half laboratory period per week throughout the session at times appropriate to the progress of the course. Prof. Brown.

Text-books:—Strength of Materials, Morley; Reinforced Concrete, Taylor and Thompson, or Reinforced Concrete Construction, Vols. II and III, Hool.

96. BRIDGE DESIGN. The reasons governing the selection of a particular type of bridge; discussion of the loads to which the bridge will be subjected; calculation of the stress in the several members; determination of the sectional areas and forms of the members; design of the connections; preparation of complete drawings.

Required of students in Civil Engineering. Eight hours per week. Prof. MacKay, Mr. Wilson.

Reference books:—Kirkham's Structural Engineering; Ketchum's Structural Engineer's Handbook; Waddell's Bridge Engineering.

99. HYDRAULIC MACHINES. The course includes the application of the principles of hydraulics to the determination of formulæ for

the design of turbines and centrifugal pumps. Examples are worked showing the methods of finding the leading dimensions of different types of such machines. Representative machines and methods of regulation, etc., are considered in detail. The transmission of power by hydraulic pressure is also considered, and the functions of the accumulator are dealt with, along with the influence of inertia forces in the operation of such machines as reciprocating motors, pumps, riveters, etc. Two hours per week, second term. Prof. Brown.

Text-book:—Hydraulics and its Application, Gibson.

101. HYDRAULICS AND LABORATORY. A short course embodying the hydraulic principles outlined under courses 97 and 98 will be given in the first term. There will be one lecture per week, and six or more laboratory periods at hours to be arranged. Required of Mining, Metallurgical and Chemical Engineering students of the fourth year. Dr. Batho.

Text-book:—Slocum, Elements of Hydraulics.

100. MUNICIPAL ENGINEERING. (Session 1918-19.) *Water Supply.* The quantity and quality of water; rainfall and evaporation; storage as related to the supplying capacity of watersheds; combined and separate fire and domestic systems with reference to their requirements as factors in the selection of sources of supply; works for the collection, storage and carriage of water to the point of distribution; natural and artificial purification; the distribution system with location of mains, hydrants, valves, blow-offs, etc.; field and office work in connection with design, estimates of cost, construction, record plans and management. Required of Civil Engineering students. Two hours per week, second term. Mr. French. In the Session of 1919-20 this course will also include *sewage of cities and towns and roads and pavements.*

100. MUNICIPAL ENGINEERING. (Session 1919-20.) (*a*) *Sewerage.* General methods and economic considerations; quantity of sewage; storm water run-off; design of sewers and appurtenances; manholes; flush tanks, catch basins, overflows, outlets, siphons, etc.; construction methods, materials and costs; estimates; maintenance and management; problems in design and estimating. (*b*) *Sewage Disposal.* Physical, chemical, biological and economic aspects of sewage treatment; disposal by dilution; screening, sedimentation, filtration, disinfection, etc.; maintenance and management. (*c*) *Water Supply.* Quantity, quality and pressure required; rainfall and evaporation; pumping machinery; storage; aqueducts, pipe lines and distribution systems; appurtenances—valves, hydrants, etc.; purification systems; fire service; construction methods, materials and costs; estimates; problems in design and estimating. (*d*) *Roads and Pavements.* Highway economics; surveys and

location; grades; cross sections; paving materials, bituminous, stone, brick, wood, concrete, etc.; construction methods; street cleaning and repairs; estimates; problems in design and estimating. (*e*) *Waste Disposal.* Composition and quantity of city wastes, ashes, garbage, rubbish, etc.; collection; disposal, dumping, land treatment, incineration, reduction, feeding to swine, etc.; costs and returns.

Required of Civil Engineering students in the fourth year. Two hours per week, first term, and five hours per week, second term. Mr. French.

Text-books:—Turneaure & Russell, "Public Water Supplies"; Metcalf & Eddy, "American Sewerage Practice," Vols. 1 and 3.

References:—Folwell, "Sewerage"; Flinn, Weston and Bogert, "Water Works Engineers' Handbook"; Blanchard and Drowne, "Highway Engineering."

102. Railway Engineering. General railway organization, organization and rules of the Maintenance of Way department, roadway, ballast, ties, timber preservation, rails, rail fastenings, turnouts, track accessories, structures, stresses in the track, track tools, track work, work train service, maintenance of way records and accounts, programme for expenditures, betterments. Required of Civil Engineering students. Mr. Cronk.

105. Technical Elasticity. The application of Castigliano's Theorem and the Method of Least Work to rectangular frames; beams on elastic supports; reinforced concrete structures, etc.; the theory of riveted joints; Bryan's theorem with applications to the calculation by successive approximations of columns with various types of loading, lateral loads and intermediate supports; comparison with other methods; elastic stability; the vibration of structures; the general equations of elasticity with various applications, special attention being paid to approximate numerical solutions; the strength of flat plates, etc.; the torsion of thin tubes and prisms of non-circular cross-section; the determination of stress distribution by means of polarized light. For graduates. Dr. Batho.

106. Theory of Structures. Secondary stresses due to rigidity of joints, eccentric connections, deflection of floor beams, etc.; frames with redundant members; influence lines for arches and other statically indeterminate structures; critical discussion of specifications for built up members in the light of tests. For graduates. Professor Mackay.

DEPARTMENT OF DESCRIPTIVE GEOMETRY AND FREEHAND DRAWING.

ASSOCIATE PROFESSOR:—H. F. ARMSTRONG.

LECTURERS:— A. J. KELLY (on military service, overseas)
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DEMONSTRATOR:— _____

This Department provides a general course in drafting office methods and a training in the ground-work necessary to prepare the student for the work required in the Engineering courses of the third and fourth years. The accurate use of drawing instruments is practised and study is made of the various projection methods commonly employed. The problems in Descriptive Geometry are especially designed to develop the power of mentally picturing unseen objects and grasping groups of details.

First Year.

341. DESCRIPTIVE GEOMETRY. Geometrical methods; plane figures; areas; paths of points moving in planes, etc.; projections of plane and solid figures; shadows, etc.

Three hours per week. Professor Armstrong.

Text-books:—Geometrical Drawing by C. H. McLeod; Descriptive Geometry, H. F. Armstrong.

342. FREEHAND DRAWING. The object of this course is to train the hand and eye to note and record the essential characteristics and proportions of objects by means of sketches and diagrams of machines, etc., and to prepare dimensioned sketches from which to make scale drawings. Professor Armstrong.

343. LETTERING. Plain block alphabets, round writing, and titles, such as are chiefly in use in draughting offices, will be dealt with. Professor Armstrong.

Second Year.

345. DESCRIPTIVE GEOMETRY AND PERSPECTIVE.* Intersections of surfaces; intersecting planes and tangent planes; axometric, including isometric projections and perspective projection.

Three hours per week. Professor Armstrong.

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* This course will not be given in the session of 1918-19.

DEPARTMENT OF ELECTRICAL ENGINEERING.

PROFESSOR:—L. A. HERDT.

ASSOCIATE PROFESSOR:—C. V. CHRISTIE.

ASSISTANT PROFESSOR:—E. G. BURR.

DEMONSTRATORS:— { W. D. FOWLER. H. F. SCHIPPEL.

Third Year.

113. ELECTRICAL ENGINEERING. The theoretical consideration of current flow in circuits; the laws of electro-magnetism and of the magnetic circuit; the theory and operating characteristics of direct current machinery; the principles of alternating current machinery. Required of students in Electrical Engineering. Two hours per week. Professor Christie.

Text-book:—Christie's Electrical Engineering.

114. ELECTRICAL ENGINEERING LABORATORY. Preparation of reports; construction, handling and protection of electrical apparatus; use of instruments and precision of measurement; predetermination of the characteristics of electrical machinery; special and shop testing.

Tests are made in the laboratory on:—Current flow in circuits; metering and controlling devices, generators, motors, boosters, balancers and motor generator sets; arc and incandescent lamps; reflectors. These tests are intended to illustrate the principles of action and the limits of the proper use of the apparatus. Students are furnished with special laboratory notes. Required of students in Electrical Engineering. Laboratory, six hours per week. Problems, two hours per week. Dr. Herdt.

111. ELEMENTS OF ELECTRICAL ENGINEERING, for third year students in Mechanical Engineering and fourth year students in Civil and Mining Engineering.

A general course in electrical engineering, treating of the laws of electro-magnetism; continuous and alternating current flow in various circuits; characteristics of direct and alternating current machinery; the fundamental principles of electric lighting, power distribution and electric traction. Two hours per week. Mr. Burr. First and second terms.

Text-book:—Gray's Principles and Practice of Electrical Engineering.

112. ELECTRICAL ENGINEERING LABORATORY, for third year students in Mechanical Engineering and fourth year students in Civil and Mining Engineering.

Includes tests of direct current metering and controlling devices, dynamos, motors, boosters, motor generators and constant current

machines; experiments of variable current flow in circuits; tests of alternators, synchronous motors and converters, induction motors and transformers, etc. Three hours per week. First and second terms.

Fourth Year.

117. ELECTRICAL ENGINEERING. The treatment of alternating current circuits by vector diagrams and vector equations; the theory and operating characteristics of alternating current machinery. Required of students in Electrical Engineering. Three hours per week. Professor Christie.

Text-book:—Christie's Electrical Engineering.

118. ELECTRICAL ENGINEERING LABORATORY. Tests are made in the laboratory on alternators, synchronous motors and converters, compensators, induction motors, transformers, frequency and phase changing apparatus, potential regulators, rectifiers, etc. Students are furnished with special laboratory notes. Required of students in Electrical Engineering. Laboratory, nine hours per week.

120. ELECTRIC LIGHTING AND POWER DISTRIBUTION. The design and operation of power plants and substations. Transmission and distribution systems are taken up under the following heads:—Selection of generators, transformers, switches and auxiliary apparatus with a study of their characteristics and limitations; wiring diagrams and switchboard design; line design and construction, selection of towers, insulators and conductors, calculation of sags and spans; high voltage and transient phenomena, the protection of overhead lines, cable systems and station apparatus; industrial applications of electrical apparatus; financial considerations. This subject is required of students in Electrical Engineering. Two hours per week, first term. Dr. Herdt.

Text-book:—Standard Handbook for Electrical Engineers.

121. ELECTRIC TRACTION. Urban, inter-urban and main line electrification is taken up under the following heads:—Choice of system and apparatus; calculation of motor rating and car equipment; overhead and track construction; methods of control, braking and regeneration; storage batteries and boosters; financial considerations.

This subject is required of students in Electrical Engineering. Two hours per week, second term. Dr. Herdt.

Text-book:—Standard Handbook for Electrical Engineers.

122. ELECTRICAL DESIGN. The electrical design of direct and alternating current machinery. Special attention is paid to the limitations of the different types of machines and to the preparation

of specifications. Required of students in Electrical Engineering. Lectures, two hours per week. Problem work, three hours per week. Professor Christie.

Text-book:—Gray's Electrical Machine Design.

123. Applications of Electricity. Lectures on the electrical supply systems for industrial power and lighting; special problems of plant design; special problems of lighting in electrical systems; special problems of electrical transmission; electrolysis mitigation of electric railways. Lectures, two hours per week. Second term. Draughting room, two hours per week. Mr. Burr.

124. Electrical Photometry and Illumination. Electric light production; photometry; illumination; principles of interior and street illumination; industrial and general applications of electric power. First term. Lectures, two hours per week. Draughting room, two hours per week. Mr. Burr.

ENGLISH.

Lecturer:—G. W. Latham.

131. English Composition. In view of the importance of accuracy of expression in the case of those engaged in scientific or professional work, a course in English composition is prescribed for all undergraduates of the first year. Students who give evidence of having already reached the required standard of proficiency, by passing a special exemption, may be excused from *attendance* on this course. This special examination will be held on Monday, September 30th, at 11 o'clock in the Engineering Building.

Students who are required to take this course will be assigned to a section which will meet semi-weekly for practice and instruction in composition.

Satisfactory results in class and essay work must be obtained before entry into the second year. *All undergraduates* of the first year, whether exempt or not from attendance on the course, must pass the final examination.

In connection with this course the following text-books will be used:—Carpenter's "Rhetoric and English Composition" (Macmillan); Aydelotte's "English and Engineering" (McGraw-Hill Publishing Co.)

132. Summer Reading. Second Year. (See page 193.)

133. Summer Reading or Essay. Third Year. (See page 193.)

134. Summer Essay. Fourth Year. (See page 194.)

DEPARTMENT OF GEOLOGY AND MINERALOGY.

PROFESSORS:— { FRANK D. ADAMS. J. AUSTEN BANCROFT.
ASSISTANT PROFESSOR:—R. P. D. GRAHAM.
LECTURER:—JOHN STANSFIELD.
SESSIONAL LECTURER:—JOHN A. DRESSER.

Third Year.

141. GENERAL GEOLOGY. The lectures will embrace a general survey of the whole field of geology and will be introduced by a short course on mineralogy. Especial attention will be devoted to dynamical geology and to historical geology, including a description of the fauna and flora of the earth during the successive periods of its past history, as well as to the economic aspects of the subject.

The lectures will be illustrated by the extensive collections in the Peter Redpath Museum, as well as by models, maps, sections and lantern slides. In addition to the lectures there will be a demonstration each week. Dr. Adams.

Text-book:—Scott, An Introduction to Geology.

142. MINERALOGY. The lectures and demonstrations, illustrated by specimens and models, deal mainly with the description and means of identification of species, special attention being paid to the ores and economic minerals and to those which are important as rock constituents. The earlier lectures are devoted to a brief discussion of the geometrical and physical properties of minerals; their chemical composition; calculation of formulæ, etc.; and the principles of classification. Mr. Graham.

143. DETERMINATIVE MINERALOGY. Laboratory practice in blow-pipe analysis and its application to the determination of mineral species. Mr. Graham and Mr. Stansfield.

Fourth Year.

146. PETROGRAPHY. The modern methods of study employed in petrography are first described, and the classification and description of rocks is then taken up.

In addition to the lectures, one afternoon a week during the second term will be devoted to practical work in the petrographical laboratory. Dr. Bancroft, Mr. Graham and Mr. Stansfield.

147. ADVANCED PETROGRAPHY. This is a more advanced course than 146. In addition to the lectures, an afternoon throughout the year will be devoted to practical work in the petrographical laboratory. Dr. Bancroft and Mr. Stansfield.

Text-book:—Harker's Petrology for Students.

The petrographical laboratory is open to fourth year Mining students.

148. Ore Deposits and Economic Geology. The nature, mode of occurrence and classification of ore deposits will first be taken up. A series of typical occurrences will then be described and their origin discussed. The more important non-metallic materials, *e.g.*, fuels, clays, building stones, etc., will be similarly treated, as well as questions of water supply, artesian wells, etc. The structure of the earth's crust, more especially with reference to folding, faulting and igneous intrusion in their bearing upon mining, will then be considered, and the course will close with a discussion of the methods employed in carying out geological and magnetic surveys and in the construction and interpretation of geological maps and sections.

Dr. Bancroft will lecture on economic geology in the first term, and Dr. Adams on ore deposits in the second term.

Text-books:—Geikie, Outlines of Field Geology; Kemp, Ore Deposits of the United States and Canada; Lindgren, Mineral Deposits; Beck and Weed, The Origin and Nature of Ore Deposits.

Books of Reference:—The Reports of the Geological Survey of Canada, and the Publications of the U.S. Geological Survey.

149. Geology of Canada. A general description of the geology and mineral resources of the Dominion. Dr. Bancroft.

151. Crystallography. A short course of lectures for students in chemistry, with laboratory practice in the measurement and drawing of crystals; calculation of axial ratios, etc.; use of the polarising microscope, axial angle apparatus, etc. Mr. Graham.

152. Historical Geology. This is a continuation of course 141, and will consist of lectures, colloquia and museum work extending throughout the session. Dr. Bancroft and Mr. Stansfield.

153. Field Work. The students in mining will receive a course of instruction in geological mapping and field work—extending over one week—in connection with the summer school of mining. Dr. Bancroft, Mr. Graham and Mr. Stansfield.

154. Field Work. During the ten days immediately preceding the opening of the fall term, a special course in the field methods employed in a geological survey will be given for those students who elect the geological option in the fourth year of the Mining course. Dr. Bancroft, Mr. Graham and Mr. Stansfield.

Note.—Students of the Mining and Chemistry courses take all the mineralogy of the third year. Chemistry students, in addition to the geology of the third year, may take the mineralogy of the fourth year.

LAW AND ECONOMICS.

PROFESSOR OF LAW:—R. W. LEE.
LECTURER ON ENGINEERING ECONOMICS:—FREDERICK B. BROWN.

171. ENGINEERING ECONOMICS. This course is intended to familiarize the engineering student with the business aspect of his profession. With this in view, lectures will be given on the subjects of barter and sale; money and credit; stocks and bonds; partnerships and corporations; the formation, organization and financing of companies; analysis of balance sheet; operating and fixed charges; estimates; specifications and contracts. Mr. Brown.

175. LAW FOR ENGINEERS. This course is intended to present such an outline of the law as will be useful to engineers and business men. Among the main topics may be mentioned the general law of contracts and damages; the law of the architect and builder; the statutes affecting labour; commercial paper; sale; lease; agency and partnership; joint stock companies, insurance; carriers by land and sea. Prof. Lee.

DEPARTMENT OF MATHEMATICS.

PROFESSOR:—D. A. MURRAY.
ASSOCIATE PROFESSOR:—T. RIDLER DAVIES.
ASSISTANT PROFESSOR:—C. T. SULLIVAN.
LECTURERS:— C. BATHO. R. S. L. WILSON.

First Year.

191. GEOMETRY. Exercises in plane geometry, elements of solid geometry and of geometrical conic sections. First term. Prof. Davies, Dr. Sullivan and Mr. Wilson.

Text-book:—Hall and Stevens' School Geometry, Parts I-VI (Macmillan).

192. ALGEBRA. Miscellaneous theorems and exercises, exponential and other series, properties and solution of higher equations, complex numbers, graphical algebra with an introduction to analytic geometry, indeterminate forms, limits, derivatives, slopes of curves. First and second terms. Dr. Murray, Dr. Sullivan and Mr. Wilson.

Text-books:—Rietz and Crathorne's College Algebra (Holt & Co.); Tanner and Allen's Analytic Geometry (American Book Co.). (Macmillan).

193. TRIGONOMETRY. Plane and spherical. Second term. Prof. Davies, Dr. Sullivan and Mr. Wilson.

Text-book:—Murray's Plane and Spherical Trigonometry, with tables (Longmans).

194. MECHANICS. An elementary course in dynamics, statics, and hydrostatics. First and second terms. Dr. Sullivan and Dr. Batho.

Text-book:—Loney's Mechanics and Hydrostatics for Beginners (Cambridge University Press).

Second Year.

197. ANALYTIC GEOMETRY. The point, straight line, circle, parabola, ellipse and hyperbola, elements of geometry of three dimensions. First year (latter part of second term), and second year (first term). The second year work begins with the circle. Dr. Murray and Dr. Sullivan.

Text-book:—Tanner and Allen's Analytic Geometry (American Book Co.).

198. CALCULUS. Differentiation of functions of one or more variables, successive differentiation, tangents, etc., curvature, maxima and minima, integration, with application to areas, volumes, moments of inertia, etc. First and second terms. Dr. Murray and Dr. Sullivan.

Text-book:—Murray's Differential and Integral Calculus (Longmans).

Third Year.

201. CALCULUS. Elementary differential equations. Prescribed for Electrical Engineering students of the third year; optional for all others. First and second terms. Dr. Murray.

DEPARTMENT OF MECHANICAL ENGINEERING.

ASSOCIATE PROFESSORS:— C. M. MCKERGOW. A. R. ROBERTS.

LECTURERS:— J. A. COOTE. J. M. BISHOP.

DEMONSTRATORS:— R. L. WELDON. ———

SHOP INSTRUCTORS:— G. WOOLEY. J. STEWART. H. LANE. A. W. MILLER.

First Year.

211. MECHANICAL DRAWING. Instruction in the use of drawing instruments and materials, dimensioning, conventions and standards; preparation of working drawings and tracings of machine details and the detailing of assembly drawings. Required of all students, except architects. Six hours per week. Professor Roberts and assistants.

212. Carpentry and Wood-turning. Sharpening and care of wood-working tools; sawing, planing and paring to size; preparation of flat surfaces, parallel strips, and rectangular blocks; construction of the principal joints employed in carpentry and joiner work, such as end and middle lap joints, end and middle mortise and tenon joints, mitres, dado and sash joints; dovetailing; scarfing; joints used in roof and girder work; wood-turning; use of wood-turning tools. Required of all students, except architects. Three hours per week. Mr. Wooley.

213. Smith-Work. The forge and its tools; use and care of smiths' tools; management of fire; use of anvil and swage-block; drawing taper, square and parallel work; bending, upsetting, twisting, punching, and cutting; welding and scarfing. Required of all students, except architects. Three hours per week for one term. Mr. Stewart.

214. Foundry Work. Moulders' tools and materials used in foundry work; the cupola; the brass furnace; preparations of moulding sand; boxes and flasks; core-making; use of core-irons; bench moulding; blackening, coring and finishing moulds; vents, gates and risers; floor moulding; open sand work; melting and pouring metal; mixtures for iron and brass casting. Required of all students, except architects. Three hours per week for one term. Mr. Lane.

215. Shop Methods. Brief study of woods and of hand and machine tools used in wood-working; manufacture and working of iron and steel; forge and forge tools; welding; stock calculations; steam hammer work; drop forgings; cupola practice; moulders' tools; elementary moulding and core-making. Required of all students, except architects. One half-hour per week. Mr. Coote.

Second Year.

218. Mechanics of Machines. (*a*) *Kinematics of Machines.*—Constrained motion; kinematic pairing; velocity and acceleration in mechanisms; centrodes; analysis and classification of simple mechanisms, including the quadric crank chain, the slider crank chain and various wheel trains; design of involute and of cycloidal wheel-teeth. (*b*) *Dynamics of Machines.*—Work and power; the power and turning effort of prime movers; inertia and kinetic energy of revolving and reciprocating parts of machines. Required of all Engineering students. Three hours per week. Professor McKergow.

Text-book:—Durley's Kinematics of Machines (Wiley).

219. Mechanical Drawing.* Drafting and tracing of more difficult exercises, and the making of assembly and detail drawings of machine parts. Lectures are given from time to time during the course dealing with drafting room methods, explanation of designs, and discussion of the reasons for selection of materials. Required

* This course will not be given after the session of 1918-19.

of all Engineering students. Three hours per week. Professor Roberts and assistants.

220. MACHINE-SHOP WORK. Exercises in chipping; preparation of flat surfaces; filing to straight edge and surface plate, scraping, screwing and tapping; use of scribing block and surface gauge; marking off work for lathes and other machines; turning and boring cylindrical work to gauge; surfacing; screw-cutting and preparation of screw-cutting tools; machining flat and curved surfaces on the planing and shaping machines; drilling and boring; cutting angles and speeds; dressing and grinding tools. Required of all Engineering students. Three hours per week. Mr. Miller.

221. SHOP METHODS. Tools; tool steels; forging, hardening and tempering; case hardening; grinding and abrasives; brazing and soldering; modern welding processes; fits and fitting; interchangeable processes of manufacture; lathe construction, adjustments and practice. Required of all Engineering students. One hour per week. Mr. Coote.

Text-book:—Elements of Machine Work, R. H. Smith.

Third Year.

224. MECHANICS OF MACHINES. Mechanisms involving chamber crank trains and chamber wheel trains; helical, skew, and worm gearing; relative motion and displacement; the mechanism of the simple slide valve and of expansion valves; solution of valve setting problems; the function and dynamics of engine fly-wheels and governors; elements of engine balancing; friction and lubrication. Required of students in Mechanical and Electrical Engineering. Three hours per week. Mr. Coote.

Text- books:—Durley's Kinematics of Machines (Wiley); Ewing's Steam Engine (Camb. Univ. Press).

225. MACHINE DESIGN. Principles of the strength of materials as applied to the design of the part of machines; fastenings used in machine construction, bolts, screws, keys, cotters, rivets, and rivetted joints; journals and bearings; shafts and couplings. Required of students in Mechanical and Electrical Engineering. Two hours per week. Professor Roberts.

Text-book:—Unwin's Machine Design, Part I (Longmans). *Book of reference*:—Spooner's Machine Design (Longmans).

226. MECHANICAL ENGINEERING. General course in Mechanical Engineering of Power Plants and Prime Movers.

Fuel and combustion, steam boilers and steam production; corrosion and defects of boilers; boiler plants and accessories, principles of selection and arrangement; the steam engine; estimation of power developed; economy of steam machinery; the indicator; condensers,

pumps and accessories; steam turbines; principles of design in steam plants; gas engines and gas producer plants, their selection, economy and arrangement; general conditions governing location and design of power installations. Required of all Engineering students, except those in Mechanical Engineering. Two hours per week. Professor McKergow.

Text-books:—Meyer, Steam Power Plants (McGraw); Duncan, Steam and other Engines (Macmillan).

227. Mechanical Engineering. Fuel and combustion; steam boilers and steam production; boiler installation and operation; the indicator; the steam engine, steam distribution and economy; steam turbines; condensers and auxiliary machinery in steam plants; gas engines and gas producer plants; compressed air and refrigerating machinery. Required of students in Mechanical Engineering. Three hours per week. Professor McKergow and Mr. Bishop.

Reference books:—Riper, Heat Engines (Longmans); Nelson, Steam Boilers.

228. Mechanical Engineering Laboratory. Testing and calibration of indicators, brakes and other measuring instruments; investigation of the operation of brakes, dynamometers, and governors; tests to determine the efficiency of belt and other transmission gearing; the properties of lubricants; the economy and performance of a steam engine and boiler, of a gas engine, of an air-compressor, and of a pump. Required of all Engineering students, except those taking the Electrical Engineering course. Three hours per week. Professor Roberts and assistants.

Reference book:—Carpenter, Experimental Engineering.

223. Mechanical Engineering Laboratory.

First term, course same as 228; second term, experimental work on the relative value of throttling and expansion governors; effect on the economy of steam engine of changing from simple to compound, triple, or quadruple expansion; the testing of steam boilers, producer gas engines, air compressors, steam turbines, and a complete steam power plant test. Required of students in Electrical Engineering. Six hours per week in first term and three hours per week in second term. Professor Roberts and assistants.

Reference book:—Carpenter, Experimental Engineering.

229. Thermodynamics. Fundamental laws and equations of thermodynamics; their application to gases and to saturated superheated vapours; efficiency of ideal heat engines; properties of steam, and elementary theory of the steam engine; elementary theory of gas and hot air engines. Required of third year students in Mechanical and fourth year students in Electrical Engineering. Two hours per week. Professor Roberts.

Text-books:—Ewing, The Steam Engine and other Heat Engines (Camb. Univ. Press); Marks and Davis, Steam Tables. *Reference book*:—Ennis, Thermodynamics Applied to Engineering.

230. MECHANICAL DRAWING. Exercises in making sketches of machine parts and in preparing working drawings and tracings from them. Required of Electrical and Mechanical Engineering students. Ten hours per week during summer term, between the second and third years. Professor Roberts and assistants.

231. MECHANICAL DRAWING. This course is supplementary to the course in machine design and consists of exercises in design and draughting of fastenings, machine parts and simple machines. Required of Mechanical Engineering students. Six hours per week for first term and three hours per week for second term. Mr. Coote.

232. MECHANICAL DRAWING. A course similar to 231, but less extended. Required of Electrical Engineering students. Three hours per week.

233. SMITH WORK. Tool forging and tempering, using carbon and high-speed steels; making lathe and planer tools; taps, dies, drills, and tools for the forge; special welding. Eleven hours per week for half the summer term, prior to work in third year session. Required of Electrical and Mechanical Engineering students. Mr. Stewart.

234. FOUNDRY WORK. Moulds requiring a higher degree of skill and judgment than elementary course; special methods of strengthening the mould; coating for smooth surfaces on castings; methods of avoiding defects; cupola charging and operating; core mixtures and core making; coring moulds. For same period as 233. Required of Electrical and Mechanical Engineering students. Mr. Lane.

235. PATTERN MAKING. Use of pattern-makers' tools; elements of pattern-making; allowances to be made for draught and for contraction in moulding and casting; use of contraction rule; preparation of prints and plain core-boxes; exercises in paring and turning; construction of patterns and core-boxes for pipes, flanges, elbows, tees and valves; more difficult exercises in pattern-making, including built-up patterns and face-plate work; gear and wheel patterns. Required of students in Mechanical Engineering. Three hours per week for one term. Mr. Wooley.

236. MACHINE SHOP. Lathe work; marking off; centering; turning and boring; radial facing; filing; grinding and polishing; internal and external screw cutting; change gear calculations; taper turning and bench work. Required of students in Mechanical Engineering. Three hours per week for one term. Mr. Miller.

237. Shop Processes and Management. Materials used and methods adopted in the manufacture of patterns; marking-off, machining, fitting and erecting machines; machine drives; boiler-making and plate work; factors of economic production of machine tools; selection of economic cutting conditions; requirements for accurate and interchangeable work; economic movement of material in shop; co-ordination of various factory departments; methods of experimental investigation of shop processes; motion study; science of management. Required of students in Mechanical Engineering. One hour per week. Mr. Coote.

Fourth Year.

240. Mechanics of Machines. (a) Gyrostatic action in machines; further treatment of engine governors; knocking and shocks in reciprocating machinery; vibration; valve gears. (b) The principles underlying the stability and weight-supporting power of curved and plane surfaces driven through the air at high velocities, together with the power required to maintain these velocities are studied, and the designs of such machines used for purpose of illustration. Required of students in Mechanical Engineering. Three hours per week. Professor McKergow.

Reference books:—Dalby's Balancing of Engines; Spangler's Valve Gears; Lanchester's Aerodynamics.

241. Designing. The complete design of an engine, a pump, or a machine tool, is worked out, and the requisite working drawings and tracings are prepared. Required of students in Mechanical Engineering. Three hours per week. Professor Roberts.

242. Machine Design. (a) Design of power transmission gearing, including belts, ropes, friction, chain and toothed gearing, fits and fitting. (b) Engine details, including cylinders, piston rods, connecting rods, shafts, fly-wheels and machine frames. Required of Mechanical Engineering students. Two hours per week. Professor Roberts.

Text-book:—Unwin's Machine Design, Parts I and II (Longmans). *Reference book*:—Spooner's Machine Design (Longmans).

243. Machine Design. Course same as 242. (a) Two hours per week during the first term. Required of Electrical Engineering students. Professor Roberts.

244. Power Plant Design. The arrangement, design and operation of power plants worked by steam or gas engines; effects of requirements for lighting, heating and power distribution. One

lecture hour and one drafting room period per week. Required of students in Mechanical Engineering. Professor McKergow.

Text-book:—Gebhardt, Steam Power Plant Engineering.

245. LOCOMOTIVE ENGINEERING.* Train resistance; tractive force in locomotives; locomotive performance and rating; brakes; fuel and water in locomotive work. One hour per week.

Text-book:—Wood, Locomotive Operation and Train Control.

246. MARINE ENGINEERING.* Ship resistance and propulsion; efficiency and performance of marine machinery and propellers; arrangement and operation of main and auxiliary machinery for marine work. One hour per week.

Reference books:—Taylor, Resistance of Ships; Sennett and Oram, The Marine Steam Engine.

247. HEATING AND VENTILATION OF BUILDINGS.* Loss of heat from buildings; radiation surfaces; design and operation of heating systems; principles of ventilation; fans and blowers; design and duct systems; temperature and humidity control. One hour per week. Professor McKergow.

Text-book:—Carpenter, Heating and Ventilating Buildings (Wiley).

249. MECHANICAL ENGINEERING LABORATORY. Experimental investigation of:—engine balancing and vibration; action of governors; performance of fans and blowers; efficiency of hoisting machinery; performance of steam boilers; steam engines, steam turbines, refrigeration machines, condensers, gas engines and producers; efficiency of air compressing and pumping machinery; tests of a complete steam power plant, gas power plant, and a heating and ventilating system. Ten hours per week. Required of students in Mechanical Engineering. *Reference book*:—Carpenter, Experimental Engineering.

257. EXPERIMENTAL ENGINEERING. Theory of errors; calibration and use of instruments, measurement of power; methods of testing power-plant apparatus and the tabulation of results. Required of students in Mechanical Engineering. One hour per week. Mr. Bishop.

Text-book:—Carpenter, Experimental Engineering.

251. THERMODYNAMICS. Efficiency of the piston steam-engine, behaviour of steam in the cylinder, influence of size, speed, rate of expansion, compounding, superheating and steam-jacketing; flow of gases and vapours through orifices and nozzles and applications to

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* Each Mechanical Engineering student must take one of the three courses, 245, 246 and 247.

the design of steam-turbines; theory and analysis of performance of internal-combustion engines; refrigerating-machine cycles. Required of students in Mechancial Engineering. Two hours per week. Professor Roberts.

Text-books:—Ewing's Steam Engine (Cambridge Univ. Press); Moyer, Steam Turbines (Wiley); Marks and Davis, Steam Tables and Diagrams (Longmans).

Books of Reference:—Stodola, The Steam Turbine (trans. Lowenstein), (Van Nostrand); Clerk, The Gas Petrol and Oil Engine, Part I.

252. Machine Shop. Experimental work and studies for the minimum time required for production, involving a consideration of the best available machine tool speeds, necessary power of belting, most efficient tool angles, quality of metal and the kind of tool steel used. The course includes work in connection with the lathe, the planer, slotter, shaper, miller and turret lathe; and instruction in gear cutting and cutter grinding. Required of students in Mechanical Engineering. Three hours per week. Mr. Miller.

253. Manufacturing Plant Design. Methods adopted in designing a plant for manufacture of a specified product; lay-out of shops; construction of buildings; equipment, requirements for power, heat and light; fire protection; general system of operation and cost determination as affecting design of plant. (Optional with Course 99 [Hydraulic Machines] for students in Mechanical Engineering.) Two lecture hours and one drafting room period per week, second term. Mr. Bishop.

Text-book:—Day, Industrial Plants (Engineering Magazine).

254. Works, Organization and Accounting. Analysis of costs of production and establishment charges; elements of factory accounting, factory record systems; depreciation; organization of staff; functions of departments; purchasing systems; methods of remunerating labour; shop organization and equipment as affecting efficiency of production. Work done as far as possible in connection with course 253. Required of students in Mechanical Engineering. One hour per week. Mr. Coote.

Reference book:—Carpenter, Profit-making Management (Engineering Magazine).

DEPARTMENT OF METALLURGICAL ENGINEERING AND METALLURGY.

PROFESSOR:—ALFRED STANSFIELD.
LECTURER:—S. W. WERNER.
RESEARCH FELLOW:— ————————

Third Year.

261. GENERAL ELEMENTARY METALLURGY. An introductory course in general metallurgy, including metals and alloys, fuels, furnaces, refractory materials, pyrometry and calorimetry, and a short account of the metallurgy of copper, lead, iron and steel.

The course consists of lectures during the first term and a short laboratory course in which the following metallurgical exercises will be carried out, as far as time will permit:—(*a*) Roasting a sulphide or arsenical ore on a small scale and also in the large roasting furnace; (*b*) formation and properties of copper or lead mattes and slags; (*c*) smelting a copper or lead ore in the water-jacketed blast-furnace; (*d*) melting and casting certain metals and alloys; (*e*) the use of the electric furnace; (*f*) leaching a copper or silver ore; (*g*) elementary exercises in some of the following: pyrometry, calorimetry, tests of refractory materials, microscopic examination of metals, heat-treatment of iron or steel.

Two lectures a week during the first term and one half-laboratory period in the second term. Dr. Stansfield and Mr. Werner.

262. METALLURGICAL LABORATORY. The course covers in a more thorough manner the laboratory work mentioned in 261, particular attention being devoted to instruction in pyrometry, calorimetry, the microscopic examination of metals and the heat treatment of iron and steel. Two periods in the second term for Metallurgical students.

METALLOGRAPHY. A shorter course of one period a week in the second term is provided for Chemical Engineering students taking the inorganic option in their fourth year. This course consists mainly of the microscopic examination of metals.

263. FIRE-ASSAYING. The lectures and instruction sheets give an account of the furnaces, balances and other appliances used in assaying; the sampling and preparation of ores; fluxes and reagents, and the methods used in assaying gold, silver and lead ores, copper and copper ores and mattes; gold and silver bullion and base bullion; cyanide precipitates and solutions.

In the laboratory the students learn as many of these methods as are possible in the time allotted to this course. Care is taken that a student shall be able to make such assays as would be required at a mine, and with a fair degree of accuracy. Metallurgical and mining

students usually have an opportunity of doing additional fire-assaying in their fourth year.

One lecture and two afternoon laboratory periods a week during the first term, for Metallurgical, Mining and Chemical Engineering students. Mr. Werner.

Reference book:—C. H. Fulton, "Manual of Fire-Assaying."

264. Metallography (Summer School). A course of laboratory instruction in the methods of Metallography and its uses for controlling the heat-treatment of steel and other metals, and for detecting and explaining the nature of defective metallic materials.

This course is given in September before the third year for students in Chemistry II and Metallurgy VIII. Mr. Werner.

Text-book:—A. Sauveur, "The Metallography and Heat-Treatment of Iron and Steel."

265. Metallurgical Calculations. This is an introductory course on the application of exact chemical and physical laws to metallurgical operations, such as the combustion of fuel, the smelting of ores and the construction and heating of furnaces. One lecture a week for Metallurgical students. Dr. Stansfield.

Text-book:—J. W. Richards, "Metallurgical Calculations," Vol. I.

266. Colloquium. Metallurgical students have certain hours for reading in the library. They are required to read current metallurgical periodicals and to give an account of their reading at the colloquium which is held once a week. Dr. Stansfield.

267. Summer School (Metallurgical Works). Metallurgical students are required to attend the summer school which is held at the end of their third year. In this school visits are paid to metallurgical works both in Montreal and at a distance.

In addition to this, excursions may be made by the class from time to time to such metallurgical works as are within reach.

Fourth Year.

271. Metallurgy (General).

(*a*) The Metallurgy of copper, lead, gold, silver, zinc and nickel.

(*b*) The metallurgy of iron and steel.

Text-books:—W. Gowland, "The Metallurgy of the non-ferrous Metals"; Bradley Stoughton, "The Metallurgy of Iron and Steel."

Two lectures a week during the session and a few laboratory demonstrations. Dr. Stansfield.

272. Metallurgy. (*a*) A more detailed account of the metals mentioned in 271.

Reference books:—Hofman, "Metallurgy of Copper"; Collins, "Metallurgy of Lead"; Ingalls, "Metallurgy of Zinc"; Collins,

"Metallurgy of Silver"; Stoughton, "The Metallurgy of Iron and Steel"; Forsythe, "The Blast Furnace and the Manufacture of Pig Iron."

(*b*) General advanced metallurgy.

Text-books: — Fulton, "Principles of Metallurgy"; Hofman, "General Metallurgy."

(*c*) Metallurgical construction and design, and costs of metallurgical plant and operations.

Required of Metallurgical students. Three hours a week during the session. Dr. Stansfield.

274. Metallurgical Laboratory, Thesis Work. This time is devoted to the serious study of some metallurgical problem. Usually two students work together and present a thesis containing an account of an important published work bearing on their subject, as well as the result of their own experimental researches. Required of Metallurgical students. One half-period in the first term and three periods a week during the second term.

279. Hydro-Metallurgy. A course of two laboratory periods and one lecture a week for one term for students taking Metallurgy (VIII).

275. Electro-Metallurgy. This course of lectures is devoted mainly to a consideration of the principles and construction of electric furnaces, and their uses for smelting and refining metals. The refining of metals and the recovery of metals from their ores by electrolysis of aqueous solutions is also considered. Two lectures a week during the second term and demonstrations in the laboratory for Metallurgical, Electrical and Chemical students. Dr. Stansfield.

Text-book:—Alfred Stansfield, "The Electric Furnace."

276. Electro-Metallurgy Laboratory. The work is arranged to illustrate the lectures. Groups of students operate each of the main types of electric furnace and become familiar with some of the principles of electric furnace construction and design. One period a week during the second term.

277. Colloquium. One hour a week during the session is given to informal discussion of research and other work being done in the department, and to other topics of metallurgical interest. Dr. Stansfield.

278. Metallurgical Machinery and Design. Two periods a week, during the second term, are devoted to drafting and designing metallurgical furnaces and plants. The course includes lectures on metallurgical machinery and design, which are included in 272.

DEPARTMENT OF MINING ENGINEERING.

PROFESSOR:—JOHN BONSALLL PORTER.
ASSISTANT PROFESSOR:—JOHN W. BELL.
DAWSON RESEARCH FELLOW:—H. M. ROSCOE. (On active service, overseas.)
DOUGLAS RESEARCH FELLOW:—JOHN M. SCOTT.
HARRINGTON RESEARCH FELLOW:— ————————
MILL INSTRUCTOR:— ————————

Third Year.

291. MINING ENGINEERING. *The principles and practice of mining.*—Introductory, simple mining methods, excavation, explosives and blasting, rock drills, coal cutters, gold washing and dredging, hydraulic mining, quarrying, etc. Two lectures per week in the second term. This course is continued in the fourth year. (See 297.) Prof. Porter.

292 and 295. ORE DRESSING. *The theory and practice of ore dressing and coal washing.*—The forms in which ores occur and the effect of mixture, impurity, etc.; the theoretical considerations affecting mineral separations; the mechanical operations involved; dressing machinery—breakers, stamps, rolls, screens, jigs, vanners, tables, flotation apparatus, washers, magnetic separators, etc. Two lectures per week and laboratory. This course is continued in the fourth year. (See 299.) Dr. Porter.

ORE DRESSING LABORATORY. Simple tests of ores, sands and gravels, by means of pan, classifier, jig, table, etc. One afternoon per week in the second term. Further laborary work in the fourth year. (See 300 and 301.)

293. MINE MAPPING. The calculations and plotting of mine surveys. One afternoon per week in the first term. Mr. Bell.

Text-books:—H. C. Hoover, Principles of Mining, D. W. Brunton's Safety in Tunnelling, and R. H. Richard's Text-book of Ore Dressing.

Fourth Year.

297. MINING ENGINEERING. *The principles and practice of mining.*—Prospecting, deep wells, diamond drilling, open cut mining, shaft sinking, drifting, underground development and methods of mining. timbering, hauling, hoisting, draining, pumping, lighting, ventilating, etc.; mine accidents and their prevention; general arrangement of plant, stores and dwellings; administration; examination and valuation of mines and mine reports. Three lectures a week. Dr. Porter.

298. Mining and Ore-Dressing Machinery and Design. *The application of mechanical and electrical engineering to mining, ore-dressing and metallurgy.*—Machinery for haulage, hoisting, pumping, ventilating, etc.; mine power plants, power transmission, tramways, cableways, compressors, blowing engines, conveyors, cranes, etc.; mine and mill building, head frames, ore bins, lay-out of plant, etc. One lecture a week, and two drafting room periods in the second term for all students in course and one additional lecture per week in the second term for students taking alternative (*b*). Dr. Porter and Mr. Bell.

299. Ore Dressing and Milling. Continuation of the ore-dressing course of the third year. Gold and silver milling, amalgamation, cyaniding, flotation, etc., concentration plants, coal breakers and washers, general conclusions regarding plant design and lay out. Two lectures a week in the first term. Dr. Porter.

302. Mining Colloquium. One hour a week is given to the presentation and discussion of papers on the work being done in the department and to other matters relating to mining and ore-dressing. Students are required to take the leading part in these exercises.

300. Ore-Dressing Laboratory. Two mornings per week in the first term are given to the ore-dressing and hydraulic laboratories. This time is chiefly assigned to ore-dressing, and certain typical operations are carried out. The exercises in ore-dressing are a continuation of the third year laboratory work, but are arranged as far as possible for individuals rather than groups of students. They comprise experiments in crushing, classifying, jigging, slime treatment, magnetic separation, cyanidation and amalgamation, coal washing, etc.

(Students taking the geological alternative give one morning per week in the first term to petrographical laboratory and only one to ore-dressing and hydraulics, as above.)

301. Ore-Dressing Laboratory and Thesis Work. In the second term one whole day and one additional morning per week are given to individual work in the laboratory and to the preparation of a thesis to be filed in the departmental library, and, when suitable, published.

The subjects available for thesis work are very numerous, and range from purely theoretical investigations in crushing, screening, classification, concentration, flotation, etc., to the experimental determination of the best methods for the treatment of particular ores and coals. A large number of different lots of ore are available, and the quantities are sufficient for work on a comparatively large scale. New ores are constantly being secured.

Text-books:—In addition to the text-books already specified for the third year, students are required to provide themselves with Young's Elements of Mining and the Handbook of Mining Details or the Design of Mine Structures, published by McGraw-Hill Co. In addition to using these formal text-books, students are required to look up a large number of special references and also to make frequent use of the works named below, those marked with a * being so freely used that they should, if possible, be purchased by each member of the class: Sir C. Le Neve Foster's Ore and Stone Mining; *Donaldson's Practical Shaft Sinking; *Brinsmade's Mining Without Timber; Crane's Ore Mining Methods; *Ketchum's Design of Mine Structures; Mayer's Mining Methods in Europe; *Hughes' Text-book of Coal Mining; Galloway's Lectures on Mining; Boulton's Coal Mining; *McCulloch and Futers Winding Engines; Behr's Winding Plants for Great Depths; Saunders' Mine Timbering; *Storms' Timbering and Mining; Peele's Compressed Air Plant; Richard's Ore-Dressing; Wiard's Theory and Practice of Ore-Dressing; Rickard's Stamp Milling of Gold Ores, Economics of Mining and *Sampling and Estimation of Ore in a Mine; Del Mar's Tube Milling and Stamp Milling; *Thomson's Stamp Milling and Cyaniding; *Julian and Smart's Cyaniding Gold and Silver Ores; Von Bernewitz Cyanide Practice; *Megraw's Details of Cyanide Practice; *Hoover's Concentrating Ores by Flotation; Rickard's Flotation; *Handbook of Milling Details; *The Coal and Metal Miners' Pocket-book; Text-book of Rand Metallurgical Practice, Vols. 1 and 2.

Research Fellowships and Advanced Courses.

Special courses of instruction are offered to graduate students in mining and ore-dressing. These courses include lectures, colloquia and individual work in the laboratories and drafting room. There are three endowed Research Fellowships in the gift of the Mining Department. These are assigned to graduates of the department who show particular aptitude for advanced work.

LABORATORIES.

The specific laboratory instruction in mining subjects proper begins in the third year, with courses in assaying, elementary metallurgy and ore-dressing. In the fourth year this work is elaborated, the general method of instruction being first to conduct a limited number of important typical operations, and then to assign to each student certain methods which he must study out in detail, and upon which he must experiment and make written report. In this work he is guided by the professors and fellows, and assisted by the other students, whom he must in turn assist when practicable. In this way every

student acquires detailed knowledge of certain typical operations and makes at least one original investigation and at the same time gains a fair general experience of many of the important methods in use.

Illustrations, Museums, Societies, etc.

In addition to a large series of lantern slides, the department owns a collection of over four thousand photographs and other illustrations, and a large and representative library of trade catalogues, etc. These collections are constantly being enlarged.

The museums of the building contain suites of ores, concentrates, fuels, and metallurgical materials, models of mines and furnaces, and collections of finished products.

The McGill University Mining Society, and the Mining Society Camera Club meet at stated periods to read and discuss papers by graduate and student members, and occasionally to hear lectures by gentlemen eminent in the profession. The Society has been made a students' section of the Canadian Mining Institute, and its undergraduate members are therefore student members of the Institute, and receive all its publications. Papers read before the Mining Society may be entered in competition for all students' prizes offered by the Canadian Mining Institute, or the Engineering Institute of Canada.

Field School in Mining.

294. The summer vacation field class, instituted in 1898, is now a fixed part of the course. All students of Mining in regular course are required to attend this class at the end of the third year.

The school lasts from four and one-half to six weeks, depending on where it is held. Of this period about one-sixth is given to field work in geology, one-half or more to mining work proper, and the remainder to an examination of ore-dressing and milling plants and metallurgical establishments. The Professor and Assistant Professor of Mining and a member of the Geological Staff go with the party and hold daily demonstrations or classes. The students take notes and sketches on the ground, and afterwards are required to work up these notes and to submit a formal report.

During the last eighteen years these field parties have visited British Columbia eight times, Nova Scotia six times, Newfoundland, Pennsylvania and Michigan twice each. Numerous visits have also been made to Sudbury, Cobalt and other Ontario localities while *en route* to more distant points.

The instruction given during this field course is free to all Mining students, the only expense to them being the cost of board, lodging, and railway fares. These expenses are kept as low as is practicable and are in part met by the income of a fund provided by the late

Sir William Macdonald, from which deserving students who require aid can also have money advanced them by applying to the Professor of Mining.

At the close of the regular work of the field school arrangements are made with the managers of the mines visited and others, to give the members of the party individual employment for the remainder of the summer. All students are earnestly advised to engage in such work, and it is probable that it will be made obligatory at an early date in the future.

DEPARTMENT OF PHYSICS.

PROFESSORS:— H. T. BARNES. A. S. EVE (on military service, overseas).

ASSOCIATE PROFESSORS:— L. V. KING. A. N. SHAW.

ASSISTANT PROFESSORS:- J. A. GRAY (on military service, overseas). N. E. WHEELER. H. E. REILLEY.

DEMONSTRATORS:— A. A. SCOTT. V. HENRY.

The instruction includes a fuly illustrated course of experimental lectures on the general principle of physics, embracing in the first year:—*The Laws of Energy, Heat, Light and Sound;* in the second year, *Electricity and Magnetism,* accompanied by courses of practical work in the laboratory, in which the students will perform for themselves experiments, chiefly quantitative, illustrating the subjects treated in the lectures. Opportunity will be given to acquire experience with all the principal instruments used in exact physical and practical measurements.

First Year.

311. HEAT, SOUND AND LIGHT. Two hours per week. Tuesday and Thursday mornings. Dr. Barnes.

Text-books:—Draper's Advaiced Heat; Deschanel's Sound and Light (Renouf Publishing Co.).

312. LABORATORY COURSE. Two hours per week, spent in practical measurements in the Macdonald Physical Laboratory in conjunction with the lecture courses. See time table of sections.

Text-books:—Laboratory Manuscripts (Renouf Pub. Co.).

Second Year.

315. ELECTRICITY AND MAGNETISM. Two hours per week, Monday and Friday mornings. Mr. Wheeer.

316. Laboratory Course. Two hours per week. (*a*) *Magnetism and Electricity.*—Measurements of pole strength and moment of a magnet; the magnetic field; methods of deflection, and oscillation; comparison of moments and determination of the elements of the earth's magnetism. (*b*) *Current Electricity.*—A complete course of measurements of current strength, resistance, and electromotive force; calibration of galvanometers.

Text-books:—Brooks and Poyser, Magnetism and Electricity; Laboratory Manuscripts (Renouf Publishing Co.).

317. Laboratory Course. An additional course, involving four laboratory periods per week, with lectures, will be given in the month of September, for students in Electrical and Mechanical Engineering as part of the third year work introductory to courses 320-321.

Third Year.

320, 321. Laboratory Course. Students of Electrical Engineering will continue their work in the Physical Laboratory in the third year. The following is a brief outline of the course:—

Magnetic elements and measurements; testing magnetic qualities of iron; theory and practice of absolute electrical measurements; comparison and use of electrical standards of resistance, E. M. F., self and mutual-induction, and capacity; testing and calibration of ammeters and voltmeters; insulation and capacity tests; electric light photometry.

Wednesday morning at 10. Laboratory, Wednesday morning and afternoon. Dr. Barnes and Dr. King.

Text-book:—Laboratory Manuscripts (Renouf Pub. Co.).

Fourth Year.

322. Electrical Theory. Optional course of lectures for students of Electrical Engineering.

325 to 329. Advanced Courses and Research. For advanced courses of lectures, see under honour courses in Arts. Owing to the complete equipment of the laboratories, there are special facilities offered for those desiring to take up research work in heat, optics, sound, electricity, and magnetism and radioactivity.

DEPARTMENT OF SURVEYING AND GEODESY.

PROFESSOR:— ————————

LECTURERS:— { A. J. KELLY (on military service, overseas).
{ JAMES WEIR (Acting Head of the Department).

ASSISTANT IN FIELD WORK:—F. J. CRONK.

DEMONSTRATOR:— ————————

This course is designed to give the student a theoretical and practical training in the methods of plane and geodetic surveying, in the field work of engineering operations, and in practical astronomy in its application to geodesy. The lecture course is divided as follows:—

Second Year.

346. SURVEYING. Chain and angular surveying; the construction, adjustment, use and limitations of the transit, level, micrometer, compass and minor field and office instruments; railway circular curves; planimeter and pantograph; general topography; levelling; contour surveying; stadia surveying; land systems of the Dominion and provinces. Mr. Weir.

Students are required to carry out the following field work:—

347. FIELD WORK. (1) A farm survey, using chain and compass; (2) a compass and micrometer survey; (3) a detail survey, using chain and offset; (4) differential and profile levelling; (5) transit work.

348. MAPPING. Drafting from field notes of chain and angular surveys, and the plotting of topographical features. The tinting of maps with water-colours is also included in this course.

Third Year.

351. MAP PROJECTIONS. Graphical determination of spherical triangles; spherical projections, and the construction of maps; photographic surveying. Mr. Weir.

352. SURVEYING. Theory and use of instruments; hydrographic surveying; the use of the plane table; mining surveying; barometric and trigonometric levelling; elements of practical astronomy. Mr. Weir.

353. SURVEYING. Theory and use of instruments; the use of the plane-table; mining surveying; magnetic surveying; hydrographic surveying; barometric and trigonometric levelling; theory and setting-out of transition curves; elements of geodetic surveying; elements of practical astronomy. Mr. Weir.

354. FIELD WORK. (1) Level and transit practice, including the adjustment of the instruments; (2) the preliminary, topographic and

location surveys for a railway, including simple, compound, transition and vertical curves, profile levelling, cross-sectioning for construction, and plotting of field notes; (3) a topographic survey with stadia transit; (4) a hydrographic survey of a river channel, including measurement of discharge; (5) a survey at night illustrating underground methods; (6) astronomical observations with sextant and engineer's transit.

Fourth Year.

359. GEODESY. The determination of time, latitude, longitude and azimuth; figure of the earth, measurements of base lines and triangulation systems; adjustment and reduction of observations.

361. FIELD WORK. (1) Determination of latitude (*a*) by transit and sextant observations of Polaris, (*b*) by zenith telescope, (*c*) by noon observations with transit and sextant. (2) Determination of azimuth, (*a*) by equal altitude observations of the sun, (*b*) by observations of elongation of Polaris, (*c*) by observation of a circumpolar star with engineer's transit, (*d*) by means of solar attachments and solar compass. (3) Determination of time, (*a*) by equal altitude observations of the sun with sextant and transit, (*b*) by observations of the meridian passage of stars with astronomical transit. (4) Determination of longitude by clock comparisons and by lunar observation. (5) Base line measurements. (6) Precision levelling. (7) Measurement of angles by geodetic methods. (8) Plane table surveys.

All students are required to keep complete field notes, and to prepare maps, sections and estimates from their own surveys. This office work is principally done during the regular summer school session.

Field work is required of all students of the second year (except those taking the Practical Chemistry course), of students of the third year in the courses of Civil and Mining Engineering, and of the fourth year in the Civil Engineering course. The work will begin in 1918 on September 2nd, and will continue for four weeks.

360. GEODETIC LABORATORY.

The following determinations of the constants and errors of surveying instruments are made in the geodetic laboratory by the fourth year students in the Civil Engineering course:—(1) Measurement of magnifying power; (2) errors of graduation; (3) measurement of eccentricity of circles; (4) determination of errors of run of theodolite microscopes; (5) investigation of the errors of the graduation of a standard bar; (6) graduating scales with the dividing engine, and comparison thereof on the comparator; (7) investigation of the errors of graduation of circles on the circular comparator; (8) determination of the constants of steel tapes; (9) investigation of

the graduation errors of steel tapes on the fifty-foot comparator; (10) determination of the scale value of level vials; (11) investigation of the accuracy of barometers; (12) determination of the collimation error of an astronomical transit by fixed collimators and by nadir method; (13) measurement of inclination error in an astronomical transit by nadir observations.

The determination of gravity by means of the reversible pendulum is experimentally investigated.

The equipment of the surveying department comprises the following, in addition to the apparatus of the observatory and geodetic laboratory:—

Fourteen six-in. transit theodolites with micrometer microscope attachments; seven portable meridian transits; two zenith telescopes; forty-five transit theodolites by various makers with mining, gradienter, stadia, and solar attachments; a photo-theodolite; two 8-in. alt-azimuths; thirty-one dumpy and twelve wye levels; two gradient-telemeter levels; hand levels and clinometers; four precision levels; seventeen surveyors' compasses; one miner's dial; prismatic compasses; pocket compasses; twenty-two marine sextants and artificial horizons; box sextants; two reflecting circles; seven plane tables; five current meters; Rochon micrometers; double image micrometers; heliotrope; barometers; one 100-ft. Invar tape; 300-ft. and 500-ft. steel tapes, suitable for base measurements; steel chains and steel bands; linen and metallic tapes; sounding lines; pickets; levelling rods; micrometer targets; station pointer; pantograph, planimeters; slide rules and other minor appliances.

Examination for Land Surveyors:—Any graduate in the Faculty of Applied Science in the Department of Civil Engineering and Land Surveying may have his term of apprenticeship shortened to one year for the profession of land surveying.

Text-books and books of reference:—Gillespie's Surveying, Johnson and Smith's Theory and Practice of Surveying, Shortland's Nautical Surveying, Greene's Practical and Spherical Astronomy, American Ephemeris and Nautical Almanac, Baker's Engineering Surveying Instruments, Breed and Hosmer's Principles and Practice of Surveying, Turnbull's Underground Surveying.

REGULATIONS CONCERNING PREREQUISITE SUBJECTS.

(1) No student proceeding to a degree will be allowed to take any subject, unless he has previously passed, or secured exemption, in all prerequisite subjects.*

(2) All students proceeding to a degree as above shall be classed as undergraduates or conditioned undergraduates, the latter being students who have defective entrance qualifications or who have failed in one or more of the subjects of their course in the year previous to that in which they are entered.

(3) Except in special cases, as provided below, no undergraduate or conditioned undergraduate shall be permitted to take any second year subject until he has passed or secured exemption in all matriculation requirements, and, similarly, no third or fourth year work may be undertaken until all first or second year subjects respectively shall have been passed or exempted.

The Faculty may waive this rule in special cases on recommendation of the Committee on Registration, Standing and Promotion.

(4) Partial students are those who are not proceeding to a degree. Such students may be admitted to classes without regard to the prerequisite rule, provided that they have obtained the permission of the head of each department concerned, and have also had their courses approved by the Committee on Registration, Standing and Promotion.

(5) If a partial student wishes to obtain undergraduate standing in order to proceed to a degree, he shall not be given credit for subjects taken in contravention of the prerequisite rule until he has also passed examinations or secured exemptions in such prerequisites as may be demanded by the Committee, and, on the recommendation of the Registration Committee, has had his case approved by a unanimous vote of the Faculty.

(6) All undergraduates who at the close of any session have passed the examination in all the subjects of their year, or who at

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* It is to be noted that prerequisite subjects are those which, in the opinion of the Faculty, must have been mastered before the subjects to which they are prerequisite can be intelligently studied.

Concurrent subjects are those which so supplement one another that no one of them can be intelligently studied alone. If any subject has another which is concurrent to it, both must be taken in the same session.

the opening of the following session have removed all conditions by passing supplemental examinations in the subjects in which they have failed, may pass into the next higher year as undergraduates.

(7) All students who have conditions that have not been removed at the opening of any session are conditioned undergraduates. The rules concerning prerequisite subjects make it possible, however, for a student whose failures are not too numerous or too serious, to complete his course in five years instead of four.

No student who has failed to remove all his conditions by the beginning of the second term of the fourth year will be permitted to graduate with his class.

List of subjects in the Faculty of Applied Science with the numbers of subjects which are prerequisite and concurrent.

No.	Year	Subject	Prerequisite	Concurrent
1	II	Arch. Design I (A, B, or C.)	18, 31, 36	6
2	III	" " II (A, B, or C.)	1	7
3	IV	" " III (A, B, or C.)		8
4	V	Design IV		
5	I	Elements of Architecture		
6	II	Elements of Composition		
7	III	Theory of Design	1	
8	IV	Theory of Planning	1	
9	III or IV	Ornament and Decoration	32, 37	
10	III or IV	" " "	32, 37	
11	III or IV	" " "	32, 37	
12	III or IV	" " "	32, 37	
13	I	General History (Arts II)		
14	II	History of Arch. (Classic)		32
15	III or IV	" " (Mediaeval)	13	33
16	III or IV	" " (Renaissance)	13	34
17	V	" " (Modern)	14	
18	I	Architectural Geometry		
19	III	Perspective		
22	IV	Hygiene of Buildings	42, 43	
23	IV	Heating and Ventilation	42, 43	
24	II	Building Construction		
25	II	Building Details		24
26	II	Structural Engineering I		
27	II	Structural Eng. (Draughting)		26
28	III & IV	Structural Engineering II	82	
29	III & IV	Structural Eng. (Draughting)	82	28
30	V	Professional Practice	24	
31	I	Architectural Drawing		5
32	II	" "		
33	III	" "		
34	IV	" "		
35	V	Historical Drawing		
36	I	Freehand Drawing		
37	II	" "	36	
38	III	" "	37	
39	IV	" "	38	
40	IV	Modelling		
41	V	"	40	
42	I	Physics (Arts)		
43	I	Physics Lab. (Arts)		
44	II	Architectural Essay		
45	III	" "		
46	IV	" "		
47	V	" "		
48	II, III, IV, & V	Summer Work		
51	II	General Chemistry	311, 312	52
52	II	Gen. Chem. Lab. (Eng. Students)	311, 312	51
53	II	General Chem. Lab. (Chem. and Met. Students)	311, 312	75
54	II	Inorg. Qual. Anal. (Chem. and Met. Students)	53	55, 75
	III	Inorg. Qual. Anal.—Summer School (Chem., Eng. and Met. Eng. Students)	51, 52	55

No.	Year	SUBJECT	Prerequisite	Concurrent
55	II, III	Inorg. Qual. Anal. Lab. (Chem. and Met. Students)	53	54, 75
	III	Inorg. Qual. Anal. Lab.—Summer School (Chem. Eng. and Met. Eng. Students)	51, 52	54
56	III	Organic Chemistry	(51, 52) or (75, 53)	57
57	III	" " Lab		56
58	III	Physical Chemistry	(51, 52) or (75, 53)	
59	III	Inorg. Qual. Anal	51, 52	60
60	III	" " " Lab		59
61	III	" Quant. "	51, or 75, 52 or 53	62 or 67
62	III	" " " Lab. (Chem. Eng. Students)		61
64	IV	Advanced Org. Chem	56, 57	65
65	IV	Organic Chem. Lab	56, 57	64
66	IV	Physical Chem. and Lab	58	
67	IV	Inorg.Lab. (Chem. Eng. Students)	61, 62	
68	IV	Industrial Chemistry, Inorganic	61, 62 or 76	
69	IV	Industrial Chemistry, Organic	61, 62 or 76	
70	IV	Applied Electro-Chem. and Lab	51, 52	
71	IV	Mineral Anal. (Min'g Students)	59, 60	
72	IV	Adv. Inorg. Chemistry	58	
73	IV	Food Chemistry	56, 57	66
74	IV	History of Chemistry	51, or 75, 56	
75	II	General Chemistry (Chemistry Students)	311, 312	53
76	III	Inorg. Quant. Anal. Lab. (Chem. Students)		61
77	IV	Inorg. Lab. (Chem. Students)	61, 62	
81	II	Materials of Construction		
82	II	Graphical Statics	194	
83	II	Mechanics	194	198
86	III	Mechanics	83, 198	
87	III	Strength of Materials	83, 198	
88	I, I	" " " Lab		87
89	III	Foundations and Masonry		87
90	III	Structural Design		87
92	III	Railway Eng	83, 346, 347, 348	
93	III	" "		92
94	IV	Theory of Structures	86, 87	
95	IV	Strength of Materials	86, 87	
96	IV	Bridge Design	90	94
97	III & IV	Hydraulics	83	
98	III & IV	" Lab		97
99	IV	" Machines	86	97
100	IV	Municipal Engineering		97
101	IV	Hydraulics and Lab. (Short Course)	83	
102	IV	Railway Eng	92, 93	
111	III & IV	Elements of Elec. Eng	198, 315, 316	
112	III & IV	Elec. Eng. Lab. (Elementary)		111
113	III	Electrical Engineering	198	
114	III	Elec. Eng. Lab		113
117	IV	Electrical Engineering	113, 114, 201, 320, 321	
118	IV	Elec. Eng. Lab. (Elec. Eng. Students)	113	117
120	IV	Elec. Light and Power Distrib		[17 ,118

No.	Year	Subject	Prerequisite	Concurrent
121	IV	Electric Traction		117, 118
122	IV	Electrical Designing	232	117, 118
123	IV	Applications of Electricity	113	117
124	IV	Elec. Photometry and Illumination	113	117
131	I	English Composition		
132	II	Summer Reading		
133	III	Summer Reading or Essay		
134	IV	Summer Essay		
141	III	Geology, General		
142	III	Mineralogy	51, or 75	
143	III	" Determinative	51 or 75	
146	IV	Petrography and Lab	141	
147	IV	" (Advanced)	141, 142, 143	
148	IV	Ore Deposits and Economic Geol	141	
149	IV	Geology of Canada	141	
151	IV	Crystallography	142	
152	IV	Geology, Historical	141, 142, 143	
153	IV	Geology Fieldwork (with 294)	141, 142, 143	
154	IV	" " (alt. a)		
171	III	Engineering Economics		
175	IV	Engineering Law		
191	I	Geometry		
192	I	Algebra		
193	I	Trigonometry		
194	I	Mechanics		
197	II	Analytic Geometry	192	
198	II	Calculus	192	
201	III	Calculus	198	
211	I	Mechanical Drawing		
212	I	Carpentry and Wood Turning		
213	I	Smith Work		
214	I	Foundry Work		
215	I	Shop Methods		
218	II	Mechanics of Machines	191, 192, 194	198
220	II	Machine Shop Work		
221	II	Shop Methods		
223	III	Mech. Eng. Laboratory		226
224	III	Mechanics of Machines	83, 218	
225	III	Machine Design		87, 231 or 232
226	III	Mech. Eng. (General Course)	51	228
227	III	" " (Mech. Eng. Students)	51	228
228	III	" " Lab		226, 227 or 373
229	III & IV	Thermodynamics	51, 198	
230	III	Mech. Drawing (Summer Sch.)		
231	III	" " (Mech. Eng. Stud.)		225
232	III	" " (Elec. Eng. Stud.)		225
233	III	Smith Work (Summer School)	213	
234	III	Foundry Work (Summer School)	214	
235	III	Pattern Making	212	
236	III	Machine Shop Work	220	
237	III	Shop Processes and Management		235, 236
240	IV	Mechanics of Machines	224	
241	IV	Designing	225, 231	242
242	IV	Mach. Design (Mech. Students)	225	
243	IV	Mach. Design (Elec. Students)	225	
244	IV	Power Plant Design	227	
245	IV	Locomotive Engineering	227	244

No.	Year	SUBJECT	Prerequisite	Concurrent
246	IV	Marine Engineering	227	244
247	IV	Heating and Vent'n of Buildings	227	244
249	IV	Mech. Eng. Lab	227, 228	
251	IV	Thermodynamics	228, 229	
252	IV	Machine Shop Work	236	
253	IV	M'f'g. Plant Design		
254	IV	Works Org. and Accounting	237	252
257	IV	Exp. Engineering	227, 228	249
261	III	General Elem. Metallurgy	51	
262	III & IV	Metall. Lab. and Metallography		261 in YearIII
263	III	Fire Assaying	(51 or 52) or (53 or 75)	
264	III	Metallography		
265	III	Metall. Calculations		261
266	III	Metall. Colloquium		261
267	IV	Summer Sch. (Metall. Works)		
271	IV	Metallurgy (General)	261	
272	IV	" (Metall. Students)	261	271
274	IV	Metall. Lab. Thesis	262	271
275	IV	Electro-Metallurgy	51	
276	IV	" " Lab		275
277	IV	Metall. Colloquium	261	271
278	IV	Metall. Machinery and Design	261	271
279	IV	Hydro-Metallurgy	261	272
291	III	Mining Engineering		
292	III	Ore Dressing and Lab	51	
293	III	Mine Mapping	346, 348	
294	III	Mining Field School	141	
295	III	Ore Dressing (Chem. Eng. Students)	51	
297	IV	Mining Engineering	291	
298	IV	Mining Machinery and Design	81, 82, 226, 299	297
299	IV	Ore Dressing and Milling	292	
300	IV	" " Lab	292	299
301	IV	" " " Thesis Work	263, 300	
302	IV	Mining Colloquium		297, 299
311	I	Physics		
312	I	Physical Lab		311
315	II	Physics		
316	II	Physical Lab		315
317	III	Physics, Summer School		
320	III	Physics (Elec. Eng.)	315, 316	
321	III	Phys. Lab. (Elec. Eng.)		320
341	I	Desc. Geometry		
342	I	Freehand Drawing		
343	I	Lettering		
345	II	Descriptive Geo. and Perspective	341	
346	II	Surveying	191, 193	
347	II	Surveying Fieldwork		
348	II	Mapping	342, 343	
351	III	Map Projections	341, 345	
352	III	Surveying (Miners)	346, 347	
353	III	Surveying (Civils)	346, 347	
354	III	Surveying (Fieldwork)	346, 347	
359	IV	Geodesy	351	
360	IV	Geodetic Lab		359
361	IV	Geodetic Fieldwork	353, 354	
400	IV	Military Eng., etc		

EXAMINATION TIME TABLES—FACULTY OF APPLIED SCIENCE.

I.—Supplemental Examinations.

Supplemental examinations for all subjects of the First, Second and Third Years Applied Science are held in August or September. A schedule of these examinations may be obtained from the Dean.

II.—Sessional Examinations.

Note.—The following numbers correspond with the subjects in the prerequisite list and the departmental descriptions.
( ) indicates that the examination will be held in the first year drafting room.
[ ] indicates that th examination will be held in one of the drafting rooms or laboratories of the department concerned.
Bold-faced type shows that the examination will be held in the Molson Hall with the Arts classes.
Examinations begin at Nine A.M. and Two P.M., and normally last three hours.

First Term.

Date.		First Year.	Second Year.	Third Year.	Fourth Year.
Wednesday, January 15th	A.M.	....	....	(11) (261) (351)	(68) (243) (299) (359)
" "	P.M.	....	....	....	(120)
Thursday, January 16th	A.M.	....	....	(58) (86) (263)	(102) (124) (149) (263)
" "	P.M.	....	....	....	(70)
Friday, January 17th	A.M.	(191)	(197)	(295 (352)	(97) (101)
" "	P.M.	**13**	(53)	(61)	(71)

II.—Sessional Examinations—Second Term.

Date.		First Year.	Second Year.	Third Year.	Fourth Year.
Wednesday, April 16th	A.M.	(42)	(83)	....	(64) [146] (244)
" "	P.M.	(341)	(6)	(113) (237) (292) (353)	[151]
Thursday, April 17th	A.M.	....	(315)	(12) (226) (227)	(100) (117) (251) (237)
" "	P.M.	(5) (311)	(26)	(89)	(17) (72)
Saturday, April 19th	A.M.	(192)	(82)	[28] (56) (229)	[28] (68) (95) (229) (254)
" "	P.M.	....	(81)	(88) (262)	(148) (252)
Monday, April 21st	A.M.	(131)	....	(15) (16) (87)	(16) (94) (121) (271)
" "	P.M.	**13**	(218)	(19)	(66) (240)
Tuesday, April 22nd	A M.	....	[24] (51) (75)	(141) [224]	[30] (73) (123) (241) (298)
" "	P.M.	(18)	....	[141]	(175)
Wednesday, April 23rd	A.M.	[31] (215)	....	(23) (291)	(122)
" "	P.M.	....	(14) (198)	(171) (320)	(67) [96] (242)
Thursday, April 24th	A.M.	(194)	[1]	[2] (90)	[3]
" "	P.M.	....	[1] (346)	[2] (223) (228) (265)	[3] (99) (147) (253) (275)
Friday, April 25th	A.M.	(193)	[1]	[2] (59) (201)	[3] (215) (246) (247)
" "	P.M.	....	[1] (52) (54)	[2] (92) (111)	[3] (111)
Saturday, April 26th	A.M.	....	(221)	[142] (225)	(74) [152] (257)
" "	P.M.	....	....	....	(249)

III.—TIME TABLES FOR LECTURES.

Complete time tables for all lecture and laboratory work are bulletined in the Engineering Building, and copies of these time tables may be obtained from the Dean of the Faculty of Applied Science.

FACULTY OF LAW.

LECTURES IN THIS FACULTY FOR THE SESSION 1918-1919 WILL COMMENCE ON TUESDAY, OCTOBER 1ST, 1918.

STUDENTS MAY REGISTER AT ANY TIME DURING THE WEEK PRECEDING THE COMMENCEMENT OF LECTURES.

MATRICULATION.

Particulars regarding the Matriculation Examination are given on pages 43 to 62.

No application for examination in June will be received after May 20th.

The attention of students who intend to practise law in the Province of Quebec, or to be admitted to the notarial profession, is called to the statutory requirements for admission to study. These will be found on page 257. A certificate of admission to study, granted after examination by the General Council of the Bar, or by the Board of Notaries, is accepted in place of the Matriculation Examination.

PRIZES AND MEDALS.

See pages 85 and 86.

FEES.

See page 92.

GENERAL INFORMATION.

The lectures are delivered in the east wing of McGill College.

Students have the free use of the Law Library of the Faculty, to which large additions are continually being made. The principal reports and legal periodicals are taken. A special room for Law students is provided in the University Library. The room is open during the day, and in the evenings from eight to ten o'clock.

There is a lending library of Law-books. The use of text-books may be obtained for the session on payment of an ad valorem fee.

Moot courts are held from time to time during the session in order to afford practice in the presentation of legal arguments.

DEGREES IN LAW.

The degrees in the Faculty of Law are the LL.B., B.C.L., LL.M. and D.C.L. The two last are placed under the supervision of the Committee on Graduate Studies. Particulars will be found on pages 307 and 308.

The Degree of LL.B.

The LL.B. degree is designed to supply a wide and sound education in Law, both for those who do not intend to follow the profession of the Law, and for those who do. To the first class it offers as part of a general education a training in the methods of legal thinking.

Those who have followed it will not be qualified to practise Law—this is not intended—but they will acquire a knowledge of law from the inside which will enable them to control their professional advisers and to approach any simple legal problem with a justified confidence in their ability to handle it. It is anticipated that the course will prove particularly attractive to students who are looking forward to a career in business, journalism or public life.

For the second class of students—those who intend to practise Law—the LL.B. curriculum provides a valuable course of preliminary study. Students who intend to practise in the Province of Quebec will do well to avail themselves of it by following either the Combined Course for the LL.B. and B.C.L., or the four-year course for the B.C.L., particulars of both of which will be found below.

Course of Study for the Degree of LL.B.

The course of study for the LL.B. degree extends over four years. The first two years are taken in the Faculty of Arts. In the third and fourth years the following subjects are studied:—

1918-1919.

Roman Law.
Obligations (Civil Law).
Public International Law.
Insurance.
Shipping and Carriers.
Corporations.

In addition one full course or two half courses are to be taken from the work prescribed for the third and fourth years in the Faculty of Arts.

1919-1920.

Constitutional Law.
Jurisprudence.
Private International Law.
Commercial Sales.
Agency and Partnership.
Bills of Exchange.
Legal History (Common Law).
Elements of Contract and Tort (Common Law).
Wills and Administration.

In addition one full course or two half courses are to be taken from the work prescribed for the third and fourth years in the Faculty of Arts.

Courses of Study for the Degree of B.C.L.

For the B.C.L. degree the Faculty provides two alternative courses of study. The curriculum in each case extends over three years. In both courses the attention of students is directed to the sources of the law and to its historical development.

COURSE A is primarily designed to afford a comprehensive legal education for students who intend to practise at the Bar of the Province of Quebec or as notaries in the Province.

COURSE B is designed to meet the needs of students who intend to practise law in a common law jurisdiction, whether in the other Provinces of Canada, the British West Indies, the United States of America or elsewhere. It is also adapted to students who may not have the intention of practising law as a profession, but who wish to become acquainted with the principles of law, and to study legal science in its relation to social and commercial life.

The two courses are to a large extent identical. They include the study of Roman Law, the Constitutional Law and History of Canada and of the Empire, Public and Private International Law, all the principal branches of Commercial Law, Criminal Law and Procedure and the Law of Evidence.

COURSE A includes further a thorough study of the Civil Law and Civil Procedure of the Province of Quebec.

COURSE B substitutes for this, the study of the principles of Common Law and of Equity and of the related procedure.

Lectures are delivered on all the subjects included in both courses.

The subjects studied in the different years are as follows:—

FIRST YEAR.

Courses A and B.

Roman Law.

Constitutional and Administrative Law.

Course A.

Legal History (Quebec).
Obligations.
Real Property.
Law of Persons.
Procedure.

Course B.

Legal History (Common Law).
Jurisprudence (Historical and Analytical).
Elements of Contract and Tort.
Obligations (or one other subject from Course A).

SECOND AND THIRD YEARS.

Courses A and B.

Roman Law (special subjects).
Criminal Law and Procedure.
Municipal Law.
Public International Law.
Private International Law.
Agency and Partnership.
Bills of Exchange and Banking.
Commercial Sales.
Corporations and Companies.
Insurance.
Merchant Shipping and Carriers.
Evidence.

Course A.

Real Rights and Registration.
Lease.
Prescription.
Marriage Covenants.
Minor Contracts.
Successions and Gifts.
Wills, Substitutions and Trusts.
Civil Procedure.

Course B.

Common Law.
Equity.
Procedure.

The Faculty desires to impress upon English students following the "A" course the great importance of obtaining a familiar knowledge of French. In the practice of the profession in this Province it is indispensable that a lawyer should be able to write and speak this language.

COMBINED COURSE FOR THE DEGREES OF LL.B. AND B.C.L.

Students who have followed the course and taken the examination qualifying them for the Degree of LL.B. and who have in addition attended lectures and passed examinations in Legal History (Quebec), Real Property Law, and Civil Procedure of the first year of the B.C.L. curriculum will be admitted to the second year of *Course A* for the B.C.L. degree. They will be examined in all the subjects prescribed for the Second Year and for the final examination for the B.C.L. degree (*Course A*) and also in the Law of Persons, which will be taken in the Second Year.

Except as above provided, no student will be allowed to pursue the course for the LL.B. concurrently with the course for the B.C.L.

FOUR YEARS' COURSE FOR THE DEGREE OF B.C.L.

Candidates who are qualified by matriculation or otherwise to be admitted to the Faculty of Law but who have not completed two years in the Faculty of Arts may proceed to the Degree of B.C.L. in four years by following the combined course set forth above.

GENERAL REGULATIONS.

1. Undergraduates shall be known as of the first, second, third or fourth year, and shall be so graded by the Faculty. In each year, students shall take the studies fixed for that year, and those only, unless by special permission of the Faculty.

2. At the end of each college year there shall be a general examination of all the classes, called the sessional examination, under the superintendence of the professors, and of such other examiners as may be appointed by the Corporation. The examination shall be conducted by means of printed questions, answered by the students in writing.

3. At the end of the last year of the course there shall be an examination, called the final examination, of those students who have completed the curriculum. This examination shall be conducted by written papers, which may be supplemented by an oral examination. It shall cover all the subjects upon which lectures have been delivered during the whole course for the degree. Those students who satisfy the examiners shall be entitled, after making the necessary declaration and payment of the graduation fee, to proceed to the degree of LL.B. or of B.C.L., as the case may be. There shall be no sessional examination of students who are candidates in the final examination.

4. No student shall be considered as having kept a session unless he shall have attended regularly all the courses of lectures, and shall

have passed the sessional examinations to the satisfaction of the Faculty in the classes of his year.

5. The Faculty shall have the power, upon special and sufficient cause shown, to grant a dispensation to any student from attendance on any particular course or courses of lectures, but no distinction shall in consequence be made between the examinations of such students and those of the students regularly attending lectures.

6. On the following days, when they fall within the session, no lectures will be delivered, *viz.*: Ash Wednesday, Good Friday, Easter Monday, and Thanksgiving Day. On the following days the morning lectures will be omitted, *viz.*: All Saints' Day (Nov. 1st), and Conception Day (Dec. 8th).

EXAMINATION RULES.

1. In each examination the pass mark is 50 per cent.

2. In the final examination the maximum in Roman Law and Civil Procedure is 200 marks, and in all other subjects 100 marks. In the first year the maximum in Roman Law is 200 marks.

3. No student who fails in more than one subject in any sessional examination shall be allowed the year: Provided that a student who has failed in not more than two subjects and has obtained 50 per cent of the aggregate total of marks may make good his standing by passing a supplementary examination before the beginning of the following session.

4. In the final examination no student who fails in any one subject will be held to have passed unless he obtains 60 per cent. of the aggregate total; and no student who fails in any two subjects will be held to have passed unless he obtains 65 per cent. of the aggregate total: Provided that a student who has failed in not more than two subjects but has obtained 50 per cent of the aggregate total, may make good his standing by passing a supplementary examination at the beginning of the following session or at such other time as the Faculty may appoint.

5. A fee of $5 must be paid for the supplementary examination in each subject.

COURSES OF LECTURES.

ROMAN LAW.

PROFESSOR:—R. W. LEE.

The course on this subject is intended to accompany the study of the Institutes of Justinian, with the text of which students are expected to become acquainted.

Text-books:—For the historical part, Walton's Historical Introduction to the Roman Law (3rd ed.); and for the Institutes, Sandar's Institutes of Justinian.

Books of Reference:—Sohm's Institutes of Roman Law, translated by Ledlie (3rd ed.); Girard, Manual élémentaire de Droit Romain; Poste's Institutes of Gaius; Buckland, Elementary Principles of the Roman Private Law; Maine's Ancient Law.

ROMAN LAW (SPECIAL TOPICS).

PROFESSOR:—R. W. LEE.

Lectures will be given to the second and third years, on a selected title of Justinian's Digest. The title for the session 1918-1919 will be Dig. ix, 2 (*ad legem Aquiliam*).

CONSTITUTIONAL AND ADMINISTRATIVE LAW.

PROFESSOR:—R. W. LEE.

The object of this course is to explain the fundamental principles of Parliamentary government and of the Rule of Law in the British Constitution. Particular attention is paid to the organization of the Empire. In the second part of the course the B. N. A. Acts are commented upon, and the leading cases discussed which illustrate the respective powers of the Federal and Provincial Legislatures.

Students are expected to read Dicey, Law of the Constitution (new edition, 1915), and Sidney Low, The Governance of England (1914). Reference may also be made to Anson, Law and Custom of the Constitution; Keith, Responsible Government in the Dominions, and Imperial Unity and the Dominions; Houston, Constitutional Documents of Canada; Lefroy, Canada's Federal System.

Students should supply themselves with copies of Lefroy, Leading Cases in Canadian Constitutional Law.

OBLIGATIONS.

PROFESSOR:—A. GEOFFRION.

A course of fifty lectures, dealing with the main principles of the law of obligations, including contracts, quasi-contracts, offences and quasi-offences, the effect, the various kinds, and the extinction of obligations.

LEGAL HISTORY AND BIBLIOGRAPHY.

PROFESSOR:—ARCHIBALD MCGOUN.

This course comprises an outline of the history of the law in force in the Province of Quebec, including Constitutional History up to Confederation.

AGENCY AND PARTNERSHIP.

PROFESSOR:—ARCHIBALD McGOUN.

This course explains the principles of the law of Mandate and Partnership, as laid down in the Civil Code of Lower Canada, and also treats of civil and commercial agency.

MUNICIPAL LAW.

PROFESSOR:—ARCHIBALD McGOUN.

This course is given in alternate years with the course on Agency and Partnership.

It includes an outline of the general principles of municipal law and deals particularly with the Municipal Code of 1916 and the Government of Cities and Towns in the Province of Quebec.

LAW OF CORPORATIONS AND OF JOINT STOCK COMPANIES.

PROFESSOR:—G. W. MACDOUGALL.

General course on organization of companies under the Dominion and Quebec Companies Act. Nature of various securities; rights and powers of directors and shareholders; amalgamation and reorganization of companies; winding-up proceedings.

PERSONS.

LECTURER:—ARNOLD WAINWRIGHT.

This course covers the law of acts of civil status, absentees, marriage, separation, divorce, filiation, minority and interdiction.

CRIMINAL LAW.

PROFESSOR:—HON. SIR CHARLES DAVIDSON.
ASSOCIATE PROFESSOR:—HON. MR. JUSTICE GREENSHIELDS.

This course includes:—

A history of the criminal law and criminal procedure of England, and of their introduction into and development throughout Canada; discussion of the Criminal Code and other statutes enacting criminal offences; of the rules of evidence in criminal cases; of the Fugitive Offenders' Act; of extradition; and, generally, of the principal features belonging to the criminal law of the Dominion.

COMMERCIAL LAW, I.

PROFESSOR:—E. E. HOWARD.

The subjects dealt with include commercial sales and the law of insurance.

The course on commercial sales includes the fifth title of the Civil Code, in so far as applicable to sales of moveables, and a comparison of the common law rules and remedies.

COMMERCIAL LAW, II.

LECTURER:—S. L. DALE HARRIS.

The subjects covered in this course are: bills of exchange, promissory notes and other negotiable instruments; banking; stock exchange transactions; merchant shipping (including the jurisdiction of and procedure in the Admiralty Courts); carriage of goods and passengers.

During the session 1918-1919 merchant shipping and carriers will be taken up.

CIVIL PROCEDURE, I.

PROFESSOR:—E. FABRE SURVEYER.

This course of lectures, for the first year, deals with the articles of the Code (1 to 214 inclusive) which refer to ordinary pleadings, exclusive of incidents. The course deals also with judgments by default to appear or to plead and judgments upon confession (C. P. 418 to 420 and 527 and 548), amendments to pleadings (513 to 526), procedure in summary matters (1150 to 1162), before the Superior and Circuit courts (1120 to 1149), the Commissioners' Court and the District Magistrate's Court (1253 to 1291). It includes the schedules and rules of practice referring to the above-mentioned articles and the forms of the most common kinds of pleadings.

CIVIL PROCEDURE, II.

PROFESSOR:—E. FABRE SURVEYER.

The advanced course for the second and third years covers all matters of procedure not dealt with in the first year course, and includes trial, provisional remedies, such as capias, attachment before judgment, injunction, etc., and special proceedings, such as proceedings relating to corporations and public offices, mandamus, etc., as well as the rules of pleading in the more complicated classes of action. It is divided into two parts, taken in alternate years.

SUCCESSIONS, GIFTS, WILLS, SUBSTITUTIONS AND TRUSTS.

PROFESSOR:—P. B. MIGNAULT.

Two titles of the Civil Code, that of Successions, and that of Gifts *inter vivos* and by Will are here explained. The order of the Code is followed, so that the whole subject is divided, somewhat unequally, into two courses given in alternate years.

First Course:—Successions and Gifts, approximately 35 lectures.

Second Course:—Wills, Substitutions and Trusts, about 30 lectures.

MARRIAGE COVENANTS AND MINOR CONTRACTS; LEASE AND HIRE, PRESCRIPTION.

LECTURER:—W. F. CHIPMAN.

Two courses—in alternate years.

During the session 1918-1919 the subjects dealt with will be Lease and Hire and Prescription.

REAL PROPERTY LAW.

PROFESSOR:—W. DE M. MARLER.

FIRST YEAR COURSE:—

Distinction of things; ownerships, usufruct—Civil Code, 374-498—modes of acquisition of property—Civil Code, 583-595.

SECOND AND THIRD YEAR COURSES:—50 lectures in alternate courses.

First Course:—Modes of acquisition of immoveables:—25 lectures.

Second Course:—Privileges on immoveables and hypothecs; servitudes—25 lectures.

PUBLIC INTERNATIONAL LAW.

PROFESSOR:—E. LAFLEUR.

Sovereignty and equality of independent states; recognition of belligerency and independence; justifiable grounds of intervention; modes of territorial acquisition; territorial boundaries; doctrine of exterritoriality; treaties and arbitrations; laws of war; neutrality of states and individuals; laws of blockade; contraband; confiscation; prize-courts and their jurisprudence.

The students' attention will be specially directed to treaties, diplomatic relations, and international arbitrations, in which Canada is directly concerned.

PRIVATE INTERNATIONAL LAW.

PROFESSOR:—G. W. MACDOUGALL.

Distinction between the *a priori* and positive methods; sources of the positive law of Quebec on the subject; application and illustrations of the rules for solving conflicts of law; comparison between our jurisprudence and that of England, France and the United States.

EVIDENCE.

LECTURER:—ARNOLD WAINWRIGHT.

This course consists of an explanation of the main principles and rules of evidence in the civil and commercial matters governed by the provisions of the Civil Code.

In the course of the lectures articles 1203 to 1244 of the Civil Code, and such articles of the Code of Civil Procedure as relate to the subject of Evidence, will be commented upon and explained.

LECTURES SPECIAL TO THE B. COURSE.

Particulars with regard to these courses may be obtained from the Dean of the Faculty.

APPENDIX.

The attention of intending students is called to the following provisions of the Revised Statutes of Quebec and amendment, as bearing on the requirements for the study and practice of law in the Province.

I. REGULATIONS APPLICABLE TO THOSE WHO INTEND TO BECOME MEMBERS OF THE BAR.

N.B.—The articles are here abridged.

Article 4522 R.S.Q.—Examinations for admission to study and to practise law in the Province of Quebec are held at the time and place determined by the General Council.

The examinations are held alternately in Montreal and Quebec every six months; namely, at Montreal, on the second Tuesday of each January, and at Quebec on the first Tuesday of each July.

All information concerning these examinations can be obtained from the Secretary-Treasurer of the General Council. The present General Secretary is Mr. Victor Martineau, K.C., 66 St. James Street, Montreal.

Article 4524.—Candidates must give notice, as prescribed by this article, at least one month before the time fixed for the examination, to the Secretary of the section in which he has his domicile or in which he has resided for the past six months.

Article 4475.—This article provides that candidates holding the degree of Bachelor of Arts, Bachelor of Science, or Bachelor of Letters from any Canadian or British University are dispensed from the examination for admission to study. Such candidates are required to give the notice mentioned above.

Article 4526 R.S.Q. (as altered by by-law of the General Council). —On giving the notice prescribed by Article 4524, the candidate pays the Secretary a fee of $2.00, and makes a deposit of $125.00 for a complete certificate of admission to study; of $70.00 for a partial certificate of admission to study; and of $200.00 for admission to practice, which deposit, less $30.00, is returned in case of his not being admitted.

Article 4531.—To be admitted to practice, the student must be a British subject and must have studied regularly and without interruption during ordinary office hours, under indentures before a notary as clerk, or student with a practising advocate during four years, *dating from the registration of the certificate of admission to study.* This term is reduced to three years in the case of a student who has followed a regular law course in a university or college in this Province and taken a degree in law therein.

The Revised By-laws passed by the General Council of the Bar of the Province of Quebec, December 14th, 1907, provide as follows:—

Article 53.—A course of lectures on law given and followed at a university or college in this Province, and a diploma or degree conferred on students by such university or college shall be held to be such as contemplated in Article 4531 R.S.Q. only when the university or college conferring the degree and the student who receives it shall have efficiently followed the programme herein set forth.

A regular course of law in a university or college in the Province shall be of seven hundred and fifty lectures of one hour each, on the subjects and in the proportions following:—

ROMAN LAW:—103 lectures:—This subject shall include an introduction to the study of law and the explanation of and comments on the Institutes of Justinian and the principal Roman jurisconsults.

CIVIL, COMMERCIAL AND MARITIME LAW:—413 lectures:—Lectures on these subjects shall cover at least three years. They consist of the history of French and Canadian law, the explanation of and comments on the Civil Code of the Province of Quebec and the statutes relating to Commerce and Merchant Shipping.

CIVIL PROCEDURE:—103 lectures:—Lectures on this subject shall extend over at least two years. It shall consist of the explanation of and comments on the Code of Civil Procedure and the statutes amending it, the organization of the Civil Courts of this Province and the history of the different judicial systems of the country; also,

the special modes of procedure provided by statutes and laws of general application.

INTERNATIONAL LAW, Private and Public:—21 lectures.

CRIMINAL LAW:—69 lectures:—This subject includes the history of criminal law in Canada, the constitution of criminal courts, criminal procedure, comments on statutes relating to criminal law, the relation of criminal law in Canada to the criminal law of England. The lectures shall extend over two years.

ADMINISTRATIVE AND CONSTITUTIONAL LAW:—41 lectures:—These subjects include an inquiry into the different political institutions and the public institutions of the country, the powers, organization and procedure of the Federal Parliament and of the Local Legislature, the laws on Education and the Municipal Code.

Article 55.—Candidates for practice who hold a degree in law from a university or college in this Province shall produce with their notices a certificate from the principal or rector of such university or college to the effect that they have followed a course of lectures on law in the same manner during at least three years, in conformity with the by-laws of the Bar; and such certificate shall further specify the number of public lectures at which they shall have attended on each subject mentioned in the foregoing programme, during each of the said three years, and during the three years combined.

Article 56.—The examiners shall not consider a university degree in law valid for the purpose of admission to the Bar if they find that the candidate has not in fact followed the programme above.

II. REGULATIONS APPLICABLE TO THOSE WHO INTEND TO BECOME NOTARIES.

For the regulations applicable to candidates for the notarial profession, see Revised Statutes of Quebec, Arts. 4774-4807.

TIME TABLE OF LECTURES FOR THE B.C.L.

(three years course)

FACULTY OF LAW.

SESSION 1918-1919.

FIRST YEAR.

Tuesday, October 3rd, 1918, to Wednesday, January 17th, 1919 (14 weeks).

Roman Law	The Dean	9.30 a.m.	M., W., Fr.
Constitutional Law	The Dean	4.00 p.m.	T., Th.
Legal History (Quebec)	Prof. McGoun	8.30 a.m.	M., W., Fr.
Property Law	Prof. Marler	4.00 p.m.	M., W., Fr.
Obligations	Prof. Geoffrion	8.30 a.m.	T., Th.
Procedure	Prof. Surveyer	5.00 p.m.	T., Th.

Monday, January 22nd, 1919, to Friday, April 14th, 1919 (13 weeks).

Roman Law	The Dean	9.30 a.m.	M., W., Fr.
Constitutional Law	The Dean	4.00 p.m.	T., Th.
Obligations	Prof. Geoffrion	8.30 a.m.	T., Th.
Procedure	Prof. Surveyer	8.30 a.m.	M., W., Fr.
Law of Persons	Mr. Wainwright	5.00 p.m.	M., Fr.

SECOND AND THIRD YEARS.

Tuesday, October 3rd, 1918, to Wednesday, January 17th, 1919 (14 weeks)

Successions, Gifts	Prof. Mignault	8.30 a.m.	M., W.
Real Property	Prof. Marler	4.00 p.m.	T., Th.
Company Law	Prof. MacDougall	5.00 p.m.	M., W.
Criminal Law	Prof. Greenshields	5.00 p.m.	T., Th.
Procedure	Prof. Surveyer	8.30 a.m.	T., Fr.
Lease, Hire, Prescription	Mr. Chipman	8.30 a.m.	Th., Sat.
Public International Law	Prof. Lafleur	5.00 p.m.	Fr.
Roman Law [Dig. XLI. 1].	The Dean	4.00 p.m.	M.

Monday, January 22nd, 1919, to Friday, April 13th, 1919 (13 weeks).

Successions, Gifts	Prof. Mignault	8.30 p.m.	M.
Criminal Law	Prof. Greenshields	5.00 p.m.	T., Th.
Lease, Hire, Prescription	Mr. Chipman	8.30 a.m.	Th., Sat.
Municipal Law	Prof. McGoun	8.30 a.m.	W., Fr.
Procedure	Prof. Surveyer	8.30 a.m.	T.
Insurance	Prof. Howard	5.00 p.m.	M., W.
Public International Law	Prof. Lafleur	5.00 p.m.	Fr.
Mer. Shipping, Carriers	Mr. Dale Harris	4.00 p.m.	W., Fr.
Roman Law [Dig. IX. 2]	The Dean	4.00 p.m.	M.

TIME TABLE OF LECTURES FOR THE LL.B. AND B.C.L. COURSES.

SESSION 1918-1919.

[This time table applies to students who are taking (1) the LL.B. course alone; or (2) the combined course for LL.B. and B.C.L.; or (3), the four year course for B.C.L. The courses of lectures printed in italics are included in (2) and (3), but not in (1). All three classes of students will take in addition one whole or two half courses in the Faculty of Arts curriculum of the Third and Fourth Years.

FIRST YEAR (*First Term*).

	8.30	9.30	4.00	5.00
Mon.	*Legal History (Quebec)*	Roman Law		Corporations
Tues.	Obligations			*Civil Procedure*
Wed.	*Legal History (Quebec)*	Roman Law		Corporations
Thurs.	Obligations			*Civil Procedure*
Fri.	*Legal History (Quebec)*	Roman Law		Public I.L.

FIRST YEAR (*Second Term*).

	8.30	9.30	4.00	5.00
Mon.	*Civil Procedure*	Roman Law		Insurance
Tues.	Obligations			
Wed.	*Civil Procedure*	Roman Law	Carriers	Insurance
Thur.	Obligations			
Fri.	*Civil Procedure*	Roman Law	Carriers	Public I.L.
Sat.				

FACULTY OF MEDICINE

Fuller details than are here given will be found in the Special Calendar issued by the Faculty, which may be obtained on application to the Registrar.

The Eighty-seventh session of the Faculty will be opened on Tuesday, October 1st, 1918. The regular lectures in all subjects will begin on Wednesday, October 2nd, at the hours specified in the time-tables, and will continue until April 30th, 1919.

FOUNDATION AND EARLY HISTORY.

The Faculty of Medicine of McGill University is the direct outcome and continuance of a teaching body known as the Montreal Medical Institution, which was organized as a medical school in the years 1823-24 by Drs. Wm. Robertson, Wm. Caldwell, A. F. Holmes, John Stephenson and H. P. Loedel. These men constituted the first medical staff of the Montreal General Hospital, itself established in 1819. The first session of the Montreal Medical Institution opened in November, 1824, with 25 students, and the lectures were given at the house of the Institution, No. 20 St. James Street, a building situated on the north side of St. James Street, at or near Place d'Armes.

In the year 1829, the Montreal Medical Institution became, by the formal act of the Governors of the Royal Institution for the Advancement of Learning, the Medical Faculty of McGill University. It is thus the oldest Faculty of the University. The first session of the McGill Medical Faculty took place in the winter of 1829-30, and the first university degree, a medical one, was conferred four years later, in 1833.

There were no sessions held during the political troubles of 1836 to 1839, and it is owing to this fact that this is the eighty-seventh instead of the ninetieth session of the Faculty, dating from its incorporation with the University in the year 1829.

The work of the Faculty was carried on in the central part of the city until 1872, when a building was provided by the Governors on the University grounds. This building met the demands of the steadily increasing number of students until 1885, when an addition was found to be necessary.

In 1893, and again in 1898, further extensions and alterations were made, funds for the purpose having been provided by generous friends of the Faculty.

On the 16th of April, 1907, a part of these new buildings, together with the original medical building, was destroyed by fire. The wing containing the principal laboratories and lecture rooms was saved, however, and is now used by the Departments of Physiology and Medical Chemistry.

The erection of a new building was at once begun on a new site, at the corner of Pine Avenue and University St., and in 1910 the greater part of it was ready for occupation. In 1911 it was wholly available for the work of the Faculty which can now boast of one of the most modern and well-equipped medical buildings on this Continent.

MATRICULATION.

For particulars see pages 43 to 62.

PHYSICAL EXAMINATION.

For information see page 65.

REGISTRATION.

See page 68.

BOARD AND RESIDENCE.

See page 71.

FEES.

See page 90.

REQUIREMENTS FOR LICENSE TO PRACTISE.

Intending students are reminded that a University degree in Medicine does not always give a right to practise the profession of medicine. It is necessary to conform with the medical laws of the country or province in which it is proposed to begin practice. Each province in Canada at present has its special requirements for license and in most provinces a special standard of general education is insisted upon before beginning the study of Medicine. Students who intend practising in Canada are warned that in certain of the provinces it is necessary to be registered five years before obtaining a license to practise. It follows that entrance qualifications must be registered in the province in which the student intends to practise at the beginning of his course in Medicine.

For the convenience of students, a list of names and addresses of the Registrars of the Medical Councils in the several provinces is here given. They should comply with the requirements for registration in one or other of the provinces, before entering on their course in the Faculty of Medicine.

QUEBEC.—Dr. J. Gauvreau, Dandurand Bldg., corner St. Catherine and St. Denis Streets, Montreal, and Dr. C. R. Paquin, Quebec.

ONTARIO.—Dr. H. Wilberforce Aikins, 170 University Avenue, Toronto.

NEW BRUNSWICK.—Dr. J. S. Bently, St. John.
NOVA SCOTIA.—Dr. W. H. Hattie, Halifax.
PRINCE EDWARD ISLAND.—Dr. James Warburton, Charlottetown.
NEWFOUNDLAND.—Dr. H. Rendell, St. John's.
MANITOBA.—Dr. J. E. Coulter, Winnipeg.
ALBERTA.—Dr. C. W. Field, Edmonton.
SASKATCHEWAN.—Dr. G. A. Charlton, Regina.
BRITISH COLUMBIA.—Dr. A. P. Proctor, Vancouver.

DOMINION REGISTRATION.

In order to take the examinations of the Medical Council of Canada a candidate must have the license of a Canadian province or he must present a certificate from the Registrar of a Provincial Medical Council that he holds a medical degree accepted and approved of by the Medical Council of said province.

Full information may be obtained by writing to the Registrar, Dr. R. W. Powell, 180 Cooper Street, Ottawa, Ontario.

GENERAL COUNCIL OF MEDICAL EDUCATION AND ENREGISTRATION OF GREAT BRITAIN.

The Matriculation Examination in Medicine of this University is accepted by the General Medical Council of Great Britain. Graduates of this University who desire to register in England are exempted from any examination in preliminary education on production of the McGill Matriculation certificate. Certificates of this University for attendance on lectures, practical work and clinics are also accepted by the various examining boards in Great Britain. To obtain a license from the General Council it is necessary to pass one of the examining boards of Great Britain in both primary and final subjects.

Detailed information may be obtained from one of the three registrars: Henry E. Allen, B.A., 299 Oxford Street, London; James Robertson, 54 George Street, Edinburgh; Richard J. E. Roe, 35 Dowson Street, Dublin.

RECIPROCITY WITH GREAT BRITAIN.

The General Council of Medical Education and Enregistration of Great Britain has entered into reciprocal relations with the Medical Councils of the Provinces of Quebec, Ontario, Nova Scotia, Prince Edward Island, Saskatchewan, Manitoba and New Brunswick. A holder of a degree in Medicine of McGill University who has obtained the license of the Province of Quebec, may register with the Medical Council of Great Britain. He will thus be eligible for competitive examination for the Army, Navy and Civil Service, and will be allowed to practise in Great Britain, South Africa, Australia, India and the West India Islands without further examination.

COURSE OF STUDY FOR THE DEGREE OF M.D., C.M.

As announced in last year's prospectus, the Faculty has decided to increase the length of the undergraduate course in Medicine to six years. This regulation will not become effective until after the close of the war, and due notice with full details of the curriculum will be published in the prospectus of the Faculty.

FIRST YEAR.

Biology (General Biology, Zoology, Embryology and Histology).
Anatomy.
Chemistry (general).
Physics.

Students who have taken one or more University courses in biology or chemistry before entering, may be exempted from attendance on lectures and examination in these subjects. Students so exempted are, however, allowed only pass standing. If they wish to obtain a higher standing they must present themselves for examination. Students exempted from general chemistry must take second year organic chemistry in their first year.

Graduates in Arts who have taken two full courses in general chemistry, including laboratory work, two courses in biology, including the subjects of botany, embryology, elementary bacteriology and dissection of one or more types of vertebrata, may, at the discretion of the Faculty, be admitted as second year students, such courses being accepted as equivalent to the first year in Medicine. Students so entering will, however, not be allowed to present themselves for the final examination in anatomy until they produce certificates of dissection for two sessions.

SECOND YEAR.

Anatomy.
Chemistry (Biological and Organic).
Physiology.
Histology.
Pharmacy.

THIRD YEAR.

Anatomy (Neurology).
Physiology.
Pathology (General).
Bacteriology.
Chemistry (Physiological and Clinical).
Parasitology.
Pharmacology.
Medicine (Clinical).
Surgery (Clinical).
Microscopy (Clinical).

In this year students visit the hospitals for the first time and receive instruction in small groups in the elements of clinical medicine and surgery.

FOURTH YEAR.

Anatomy (Medical and Surgical).
Hygiene.
Medical Jurisprudence.
Pharmacology and Therapeutics.
Medicine and Clinical Medicine.
Surgery and Clinical Surgery.
Obstetrics.
Gynæcology.
Mental Diseases.
Ophthalmology.
Oto-Laryngology.
Pediatrics.
Pathology.

In this year two medical and two surgical theatre clinics are given weekly in the Montreal General and Royal Victoria hospitals. Out-patient clinics are given to groups of students twice weekly in gynæcology and once weekly in ophthalmology and oto-laryngology. In addition, on four days of the week instruction is given to groups at the bedside, in the laboratories, and in the medical and surgical out-patient departments. The work in hygiene consists of lectures, demonstrations and laboratory work.

FIFTH YEAR.

Medicine and Clinical Medicine.
Surgery and Clinical Surgery.
Obstetrics.
Gynæcology.
Ophthalmology.
Oto-Laryngology.
Pathology.
Dermatology.

In this year most of the students' time is spent in the hospitals. Theatre clinics are given on three days of the week in each hospital in medicine and surgery. There are also daily ward classes to groups of students in these branches. In the out-patient departments of both hospitals clinics are given to groups of students in the various special branches of gynæcology, ophthalmology, oto-laryngology, dermatology, neurology, orthopædics, pediatrics and genito-urinary diseases. Clinics, ward classes and demonstrations in obstetrics are given in the new Maternity Hospital. Students of the fourth and fifth years attend the Alexandra Hospital in groups for instruction in infectious diseases. The clinical instruction in mental diseases is given in the wards of the Protestant Hospital for the Insane at Verdun.

MEDALS, PRIZES AND FELLOWSHIPS.

See page 84.

QUALIFICATIONS FOR THE DEGREE.*

1. No one will be admitted to the degree of Doctor of Medicine and Master of Surgery who shall not have attended lectures for a period of five eight-month sessions in this University, or some other university, college or school of medicine, approved by this University. Students of other universities, so approved, who may be admitted on production of certificates to a like standing in this University shall be required to pass an examination in primary subjects, and all

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* It should be understood that the programme and regulations regarding courses of study and examination contained in this calendar hold good for this calendar year only, and that the Faculty of Medicine, while fully sensible of its obligations towards the students, does not hold itself bound to adhere absolutely, for the whole of a student's course, to the conditions here laid down.

examinations in the final subjects in the same manner as students of this University.

2. Candidates for the final examination shall furnish testimonials of attendance on the following branches of medical education; provided, however, that testimonials equivalent to, though not precisely the same as those stated, may be presented and accepted:—

Biology, General Chemistry, Practical Chemistry, Physics, Histology, Embryology, Anatomy and Practical Anatomy, Physiology and Practical Physiology, Organic Chemistry, Biological Chemistry, Physiological Chemistry, Pharmacy, General Pathology, Bacteriology, Clinical Microscopy, Pharmacology, Therapeutics, Medical Jurisprudence, Hygiene and Public Health, Medical and Surgical Anatomy, Operative Surgery, Special Pathology, Morbid Anatomy, Clinical Chemistry, Principles and Practice of Surgery, Clinical Surgery, Theory and Practice of Medicine, Clinical Medicine, Obstetrics and Diseases of Infants, Gynæcology, Pediatrics, Mental Diseases, Ophthalmology, Oto-Laryngology.

He must also produce certificates of having assisted at six autopsies, of having dispensed medicine for a period of three months, of having assisted at twenty vaccinations, and of having, under the direction of a properly qualified anæsthetist, administered an anæsthetic at least six times.

Courses of less length than the above will only be received for the time over which they have extended.

3. No one will be permitted to become a candidate for the degree who shall not have attended at least one full session at this University.

4. Every candidate must give proof of having attended during at least twenty-four months the practice of the Montreal General Hospital or the Royal Victoria Hospital, or of some other hospital of not fewer than 100 beds, approved by this University.

5. He must give proof of having acted as clinical clerk for six months in medicine and six months in surgery in the wards of a general hospital recognized by the Faculty, and of having reported at least ten medical and ten surgical cases.

6. He must also give proof of having attended for at least nine months the practice of the Montreal Maternity or other lying-in hospital approved by the University, and of having acted as assistant for at least twenty cases.

7. Every candidate for the degree must, on or before the 20th day of April, present to the Registrar of the Medical Faculty testimonials of his qualifications, entitling him to an examination, and must at the same time deliver to the Registrar of the Faculty an

affirmation or affidavit that he has attained the age of twenty-one years.

8. The examinations to be undergone by the candidate shall be in the subjects mentioned on pages 265 to 267.

9. The following oath or affirmation will be exacted from the candidate before receiving his degree:—

Ego, A—— B——, Doctoratus in Arte Medica titulo jam donandus, Sancto coram Deo cordium scrutatore, spondeo:—me in omnibus grati animi officiis erga hanc Universitatem ad extremum vitæ halitum persevaturum; tum porro artem medicam caute, caste et probe exercitaturum et, quod in me est, omnia ad ægrotorum corporum salutem conducentia cum fide procuraturum; quæ denique inter medendum visa vel audita silere conveniat, non sine gravi causa vulgaturum. Ita præsens mihi spondenti adsit Numen.

EXAMINATIONS.

Frequent oral examinations are held to test the progress of the student, and occasional written examinations are given throughout the session.

Class examinations are held during the session in each of the first year subjects, the marks obtained being added to the total marks obtained at the final examinations.

If the standing obtained by any student in the class examinations is not satisfactory, he shall not be permitted to take the final examinations.

1. A minimum of 50 per cent. in each subject is required to pass and 75 per cent. for honours.

2. The work of one session must be completed and all examinations passed before a student is permitted to advance to the next.

3. Students who fail at the regular examinations in not more than three subjects of the first or second year and in not more than two subjects of the third and fourth years, may, at the discretion of the Faculty, be allowed to take the supplementary examinations before the beginning of the following session. These examinations will be held during the week preceding the regular opening of the session.

Those who fail in more subjects than are above specified are not eligible for supplemental examinations.

4. Students who fail to pass in a subject in which practical work is required may, at the discretion of the examiner, be required to repeat the course and furnish a certificate of attendance thereon.

5. Students who fail in one subject only of the final year may, at the discretion of the Faculty, be allowed a supplemental examination in that subject. Should the subject be one in which practical or clinical work is required, the student must furnish a certificate of additional hospital attendance or laboratory work before presenting himself for examination.

6. Students who fail at the examination held at Christmas may, at the discretion of the examiners, be granted supplemental examinations at a period not less than three months after the regular examinations.

7. A student who, after being registered in the first, second, third or fourth years for three successive sessions, fails to qualify for advancement, or who, after being registered in the final year for three successive sessions, fails to qualify for the degree, shall not be permitted to register again as a student of Medicine in the University.

8. Applications for supplemental examinations must be in the hands of the Registrar at least three days before the date set for the beginning of the examination, and they must be accompanied by a fee of $5.00 for each subject.

MICROSCOPES AND HÆMOCYTOMETERS.

Each student is required to provide himself, on beginning his studies, with a first-class microscope for laboratory and private study throughout his course. The Faculty will supply the instruments necessary for demonstrations, etc. The microscope must be of substantial construction and be provided, as a minimum, with the following accessories, $^2/_3$, $^1/_6$ and $^1/_{12}$ oil immersion, and a substage condenser. Such an instrument will last a lifetime and is an essential part of the equipment of a practitioner in medicine.

Should the student not be provided with such a microscope he may, (1) purchase a guaranteed instrument from the purchasing department of the University for the sum of $60.00, or (2) on depositing a bond of $60.00, signed by two property-holders of his place of residence, hire and purchase a microscope from the University by paying the sum of $7.00 per annum for five years and the further sum of $40.00 at the expiry thereof.

Any student proposing to hire a microscope under plan (2) should have a bond executed before leaving home, and deposit it

with the Bursar at the begining of the session. Failing this, a student must on registration take immediate steps to procure a bond. If a bond is not furnished by the 15th of November, the student will be deprived of the use of the microscope. Blank forms of bond may be obtained from the Registrar or the Bursar.

Any student selecting plan (2) will have the entire control of the instrument and may use it at home during the holidays, but until the final payment of $40.00 shall have been made it shall remain the absolute property of the University, and no refund of any annual payment shall be made under any circumstances.

A student retaining a rented microscope during the summer and not returning to the University the following session, must send back the instrument before the 10th October following; in default of which his bondsmen will be called on to pay its full value. Graduating students must return rented microscopes before graduating.

Each student of the third year is required to have a hæmocytometer, and, in order that an instrument of uniform value and accuracy may be in the hands of all students, the University has purchased a supply, which will be sold at cost price.

DOUBLE COURSES.

See page 114.

COURSES OF LECTURES.

ANATOMY.

PROFESSOR:—A. C. GEDDES.
ASSOCIATE PROFESSOR OF HISTOLOGY AND EMBRYOLOGY:—J. C. SIMPSON.
ACTING PROFESSOR OF ANATOMY:—A. E. ORR.
LECTURER IN HISTOLOGY:—W. M. FISK.
LECTURER IN APPLIED ANATOMY:—A. T. BAZIN.
LECTURER IN NEUROLOGY:—C. K. RUSSEL.
LECTURER:—A. FREEDMAN.
DEMONSTRATOR:—W. H. SMYTH.
ASSISTANT DEMONSTRATOR:—A. STEWART.

Anatomy is taught in the most practical manner possible. There are courses in the first, second, third and fourth years. Each course includes practical work, and the fourth year work is designed to apply especially to medicine and surgery.

The first year course includes histological technique; embryology, which comprises so much elementary comparative work as will enable

students to understand the essential points in human development, and a study of human development up to the stage represented by the Kroemer Pfannenstiel Zygote; histogenesis and the histology of tissues.

The study of the whole of human organogenesis and of the histology of human organs forms a part of the work in the second and third year courses in anatomy.

Recently the Department has expended large sums of money in bringing its teaching equipment up to the highest possible standard and in providing increased facilities for research by graduates or senior students.

The Dissecting Room is open from 9 a.m. to 6 p.m., and in consequence of the excellent Anatomy Act of the Province of Quebec, an ample supply of fresh material is always available.

Human Anatomy.

First Year: General embryology, histology of tissues, osteology and myology.

Second Year: Splanchnology (including histology and organogenesis).

Third Year: Neurology (including histology and organogenesis); organs of special sense.

Fourth Year: Applied anatomy, including topographical and regional anatomy.

Dental Anatomy.

First Year: As in first year Medicine.

Second Year (first term):—Regional anatomy of the head and neck; general dissection.

N.B.—In extension of this, a course on the special anatomy of the teeth is conducted by the Dental Department.

As in all the courses conducted by the Department of Anatomy a record of the work done is kept by graphic representation, students are advised to acquire some facility in drawing before entering upon their anatomical studies.

BIOLOGY.

The course in Biology for Medical students is conducted, conjointly, by the University Departments of Botany and Zoology. It consists of three parts:—

Part I.

PROFESSOR OF BOTANY:—F. E. LLOYD.
LECTURER IN BIOLOGY:—F. S. JACKSON.

This part of the course deals with the rationale and simple technique of microscopic vision, including both light and dark field illumination (ultramicroscope). Twelve lectures and twelve laboratory periods (three of each per week during the first month of the session).

Part II.

PROFESSOR OF ZOOLOGY:—ARTHUR WILLEY.
LECTURER:—J. STAFFORD.
LECTURER IN BIOLOGY:—F. S. JACKSON.

This part of the course is designed to introduce the student to certain fundamental facts of zoology. The lectures deal with the principles governing the formation of tissues and organs and lead up to an outline of vertebrate anatomy and physiology in which special attention is directed towards the class mammalia of which man is a member. The evolution of the mammalian type is illustrated by the progressive differentiation of the body cavities, the organs of breathing, circulation, alimentation and excretion, the nervous system and the skeleton.

The laboratory work is concerned with elementary histology and with a practical and thorough study of the following selected types: Amœba, Paramecium, Euglena or Chilomonas, Hydra, Lumbricus, Amphioxus, Scyllium, Rana, Lepus.

Three lectures per week for fourteen weeks; three laboratory periods per week, each of three hours, from the beginning of the second month of the session to the end of the first term, and two laboratory periods per week for the first four weeks of the second term.

Part III.

PROFESSOR OF BOTANY:—F. E. LLOYD.
LECTURER IN BIOLOGY:—F. S. JACKSON.

This part of the course is a continuation of Part I and runs concurrently with the course in histology and embryology. It is designed to introduce the student to the field of general (cellular) physiology.

Thirty lectures (three per week) and twenty laboratory periods; two (each of three hours) per week from the close of Part II of the course to the end of the session.

MEDICAL CHEMISTRY.

PROFESSOR OF ORGANIC AND BIOLOGICAL CHEMISTRY:—R. F. RUTTAN.
ASSOCIATE PROFESSOR OF BIOLOGICAL AND PHYSIOLOGICAL CHEMISTRY:—V. J. HARDING.
ASSISTANT PROFESSOR OF GENERAL CHEMISTRY:—V. K. KRIEBLE.
LECTURERS:—T. P. SHAW. A. R. M. MACLEAN.
DEMONSTRATORS OF GENERAL CHEMISTRY:—E. G. YOUNG, B.A. JOHN RUSSELL, B.A.
DEMONSTRATORS OF CLINICAL CHEMISTRY:—R. H. M. HARDISTY. ————————
ASSISTANT DEMONSTRATOR OF CLINICAL CHEMISTRY:—J. A. C. TULL.

Instruction in chemistry for students in Medicine is given during a portion of each of the first three years.

First Year: During the first term the principles governing chemical action are studied in a systematic laboratory course. A printed synopsis of the work of each day is provided and necessary explanations given before beginning the work. The course includes a study of chemical phenomena; the preparation and properties of typical elements and compounds; the laws of chemical action; gravimetric and volumetric determinations, and a short course in qualitative analysis. The student is required to pay special attention to the keeping of an accurate record of his observations and calculations. Note books for this purpose are provided and are examined and criticized by the demonstrators. An examination is held at the end of the term.

During the first term a course of experimental lectures in *General Chemistry* is given; four per week, with frequent reviews and examinations. This course is designed to familiarize the student with the characteristics of chemical action and the conditions which modify it, rather than a detailed study of the preparation and properties of the elements and their compounds. The application of chemistry to physiology and pathology is made especially prominent. An examination in general chemistry is held at the end of the first term.

Second Year: A course of three lectures per week on *Organic and Biological Chemistry* is given during the whole session. In this course the facts and theories of organic and physical chemistry, which have an essential bearing upon medical science, are first presented in the simplest form. This is followed by a more detailed study of those organic compounds and reactions which pertain to the phenomena of life. During the winter term a course of laboratory work in organic and biological chemistry, two periods per week, is given. In this course the student will study practically the chemistry of the more important organic substances which are found in the tissues, together with the chemical and physical conditions which influence their produc-

tion. This course is intended to lead up to and partly include the subject matter of the usual courses in physiological and pathological chemistry.

The course includes a study of the carbon, nitrogen and energy cycles in nature; enzymes and catalysis; esterification, fats and lipoids; carbohydrates, amino acids, colloids, proteins, protein toxins, nuclein and purin bodies, urea, creatinin, indol, etc., together with the application of elementary physical chemistry to the problems of physiological chemistry.

Third Year: A course on *The Chemistry of Human Physiology* of two laboratory periods and one lecture per week is given throughout the autumn term. This course is designed to familiarize the student with the proximate constituents of typical foods, and the action on them of the digestive enzymes. This is followed by a study of normal urine and fæces, and the chemistry of muscle, blood, bile, etc. The aim of the course is to give the student a sound theoretical and experimental knowledge of the normal human metabolism. This course is followed by a laboratory course of about six weeks in *Clinical Chemistry* at the beginning of the second term. In this course the student is made familiar with the more convenient and practical methods for the chemical and physical examination of urine, fæces, blood, stomach contents, etc., as a preliminary to their application to the chemical diagnosis of cases.

An *Advanced Optional Laboratory Course* in clinical and biological chemistry is offered during the winter term to those students whose preliminary training in chemistry and standing in the pass course show they are able to profit by it. This course includes the more recent exact methods of determination of creatinin, ammonia, acetone; the partition of nitrogen in urine in health and disease, estimation of urea, sugar, chlorides, and uric acid in blood, etc. This course must be taken by all candidates for the Sutherland medal.

Students will find it greatly to their advantage to have a practical knowledge of elementary chemistry before entering upon the study of Medicine. Graduates in Arts of recognized universities, on presenting certificates of having taken courses in theoretical and practical chemistry, and of having passed examination in the same, may be exempted from the chemistry of the first year.

MEDICAL PHYSICS.

PROFESSOR OF PHYSICS:—H. T. BARNES.
LECTURER:—H. E. REILLEY.
DEMONSTRATOR:—V. HENRY.

First Year: This course is given in the Physics Building of the University. It consists of three lectures and a laboratory period of two hours per week throughout the first half of the session, and two

lectures and a laboratory period of two hours per week during the last half.

The lectures are experimental in character, especially designed to meet the requirements of students in Medicine. The course includes a study of energy, simple machines, properties of matter, fluid pressures, fluid motion, capillary phenomena; production, transmission and interpretation of sound; temperature and temperature measurements, gas laws and kinetic theory, heat capacity, latent heats, laws of vaporization, humidity measurements, heat conduction; elements of magnetism, laws of electrostatics, electrostatic induction and condensers; primary batteries, Ohm's law and its applications, measurements of resistance and electromotive force, measuring instruments, magnetic effects of a current, induced currents, induction coil, conduction through gases, properties of cathode rays and X-rays; radioactive substances and their radiations; laws of reflection and refraction of light, mirrors, lenses and lens combinations, microscopes, telescopes, spectra, spectrum analysis, colour, interference, crystallography, polarized light and saccharimetry.

In the laboratory the student learns the use of such instruments as the balance, vernier, spherometer, hydrometer, hygrometer, spectroscope, saccharimeter, electroscope. Verifications are made of Archimedes' principle, Boyle's law, laws of reflection and refraction, Ohm's law, etc. Measurements are taken of specific gravities, frequencies, specific heats, latent heats, electrical resistances, focal lengths, besides qualitative experiments illustrating the more important physical principles.

PHYSIOLOGY.

THE JOSEPH MORLEY DRAKE PROFESSOR:— ————————

ASSOCIATE PROFESSOR:—A. W. DOWNS.

LECTURER:—GEORGE HAYS.

DEMONSTRATOR:—N. B. EDDY.

The purpose of this course is to make the student thoroughly acquainted, as far as time permits, with modern physiology, both from a scientific and practical standpoint—its methods, its deductions, and the basis on which the latter rest. The course comprises lectures, laboratory work, demonstrations and conferences.

Lectures.—These extend over two years and are illustrated by experiments, diagrams and lantern demonstrations.

Laboratory Work.—The courses are arranged to illustrate the various branches of physiology. The students work in pairs, so as to give each man the best possible opportunity of verifying the facts for himself. As medical men have to treat human patients, special care is taken to make all the practical work illustrative of mammalian and human physiology, and as many exercises as possible are performed on mammals and on the students themselves.

The subjects are arranged as follows:—

1. Experimental Physiology. (a) Second year students work in the laboratory for one period of three hours per week throughout the year. The course comprises experiments on the heart, blood pressure and circulation, the pulse, respiration, temperature, the mechanics of digestion and the secretion of urine. (b) Third year students work for one period of three hours per week throughout the year. The course comprises experiments on muscle and nerve, the special senses, the central nervous system, together with more difficult experiments on the lines of the work in the second year, and revision.

Demonstrations.—In addition to the lectures and laboratory work, special demonstrations are given from time to time on such subjects as cannot be dealt with in a large class, such as electrocardiographic work, heart perfusions, physiology of the central nervous system, refraction in the eye, and, generally, of whatever research work is being carried out in the department.

2. Chemical Physiology (see under Chemistry).

Research Work.—Special arrangements are made for post-graduate work in physiology and for courses leading to the degrees of M.Sc. and D.Sc. For particulars apply to the Professor.

PATHOLOGY, BACTERIOLOGY AND PARASITOLOGY.

Professor:—J. G. Adami.
Acting Professor:—Horst Oertel.
Associate Professor of Parasitology:—J. L. Todd.
Associate Professors of Pathology:—L. J. Rhea. Horst Oertel.
Lecturers:—H. McKee. M. E. Abbott. A. A. Bruère.
Lecturers on Immunology:—J. C. Meakins. Fraser B. Gurd.
Demonstrators of Pathology:—Joseph Kaufmann. E. J. Mullally. J. W. Scott. C. T. Crowdy.
Assistant Demonstrator of Pathology:—L. L. Reford.
Assistant Demonstrators of Bacteriology:—_____. _____. S. S. Sperber.
Douglas Fellow in Pathology:—Louis Gross.

Pathology.

1. General pathology and pathological anatomy: lectures and experimental demonstrations twice weekly throughout the winter. Professor Oertel (Third Year).

2. Laboratory course in general pathological anatomy and histology, two hours twice weekly, winter term (Third Year). Professor Oertel, Demonstrators and Assistant Demonstrators.

3. Special pathology and pathological anatomy: lectures on the diseases of the more important systems and organs, followed by demonstrations, two hours once weekly, throughout the session (Fourth Year). Professor Oertel, and Demonstrators.

4. Demonstrations upon fresh autopsy material, once weekly (Fourth Year, in groups). Dr. Scott and Dr. Crowdy.

5. Performance of autopsies (Fifth Year, in groups). Professor Oertel, Dr. Scott, Dr. Crowdy and Demonstrators.

6. Clinical pathological conferences at the Royal Victoria and Montreal General Hospitals, once weekly (Fifth Year). Clinical and Pathological Staffs.

7. Museum demonstrations (Fifth Year, in groups). Dr. Abbott and Dr. Kaufmann.

8. Pathological research (open to graduates) by appointment. Professor Oertel.

Bacteriology.

1. Bacteria and higher parasites in relation to disease. Lectures and demonstrations, including the elements of immunology; twice weekly in autumn term (Third Year). Professor Oertel.

2. Laboratory course in bacteriology, autumn term (Third Year). Dr. Bruère, Demonstrators and Assistant Demonstrators.

3. Bacteriological and immunological research (open to graduates). Professor Oertel and Dr. Bruère, by appointment.

Parasitology.

The main feature of this course is a series of twenty lectures and demonstrations, illustrated by lantern slides, and by specimens both gross and microscopical. Demonstrations of the special methods used in the study of animal parasites are given in the laboratory.

PEDIATRICS.

PROFESSOR:—A. D. BLACKADER.

LECTURERS:— D. J. EVANS. G. G. CAMPBELL. F. M. FRY.

DEMONSTRATORS:— C. F. WYLDE. W. E. ENRIGHT.

A didactic course on the diseases of infancy and childhood, including the feeding of infants, is given during the session to students of the fourth year. Clinical and didactic lectures are given on diseases of the new-born at the Montreal Maternity Hospital. In the Montreal General and Royal Victoria hospitals weekly clinical lectures and ward demonstrations on diseases of childhood will be given to students of the fifth year, and groups of students in rotation will be assigned work in connection with the out-patient children's departments of both hospitals. The new Foundling and Baby Hospital, which has recently been opened, with a capacity of 100 beds, will be utilized during the session for a series of demonstrations in infant feeding.

PHARMACOLOGY AND THERAPEUTICS.

PROFESSOR:—A. D. BLACKADER.

ASSISTANT PROFESSOR OF PHARMACOLOGY:—J. W. SCANE.

LECTURER IN PHARMACY AND PHARMACOLOGY:—J. L. D. MASON.

DEMONSTRATOR OF PHARMACOLOGY:—WESLEY BOURNE.

The lectures on this subject are graded in the following manner:—For students of the second year there is a course in practical materia medica and pharmacy, with demonstrations and exercises in the laboratory. Prescription writing and the various modes of administering drugs are explained and illustrated.

The course in pharmacology is given in the third year and consists of a systematic course of lectures on the physiological action of drugs, with demonstrations, and practical laboratory work, during which the student is given the opportunity of studying by experiment the action of the more important drugs.

In the fourth year a systematic course is given on the principles of therapeutics and on the practical employment of drugs and remedial agents in the treatment of disease. In the fifth year, special attention is given to the subject of practical therapeutics in the ward classes by the attending physicians in both the Montreal General and Royal Victoria hospitals.

The Eddie Morrice Laboratory, comprising pharmacological and chemical research rooms, has, through the liberality of the late Mr. Morrice, been fully equipped with all necessary apparatus for carrying on extended research work.

HYGIENE.

STRATHCONA PROFESSOR:—T. A. STARKEY.
LECTURER AND ACTING DIRECTOR OF THE DEPARTMENT:—F. B. JONES.
LECTURER:—R. ST. J. MACDONALD.

The instruction in hygiene given to the medical undergraduates has been carefully designed to meet the requirements of the practitioner in medicine.

The whole course is essentially practical in its nature and is in sharp contrast with the truly didactic method of teaching. It relates chiefly to the investigation of the causes of disease, the channels of transmission and the adoption of modern preventive measures—all problems which are likely to confront the medical man daily in the prosecution of his duties.

This course is given during the third term of the Fourth Year and consists of three lectures and one demonstration per week.

The practical part of this course includes a number of visits to various places of hygienic importance. The student is thereby brought in close contact with the various conditions which he is liable to meet during his later career.

In addition to the above, lantern demonstrations of the various topics which have been previously discussed in the lectures are frequently given.

An optional practical course more advanced than the one above referred to is open to students wishing to go into greater detail.

The laboratory is provided with all apparatus needed in every branch of public health work. Advanced students are furnished with separate quarters and with every facility for the prosecution of research work.

The museum is fully equipped and contains full-sized working models and apparatus illustrative of the application of all hygiene principles. See description of museum, page 340.

MEDICAL JURISPRUDENCE.

PROFESSOR:—D. D. MACTAGGART.

In this course the criminal and civil aspects of legal medicine are taken up and fully discussed, also lunacy and its medico-legal aspects. Special attention is devoted to the subject of blood stains, the chemical, microscopic and spectroscopic tests for which are fully described and demonstrated, also the serum test for the detection of human blood. The modes of action of poisons, general evidence of poisoning and classification of poisons are first treated of, after which the more common poisons are described, with reference to symptoms, post-mortem appearance and chemical tests. The post-mortem appearances are fully illustrated by specimens. Practical demonstrations will be given once a fortnight.

MEDICINE AND CLINICAL MEDICINE.

PROFESSORS:— F. G. FINLEY. H. A. LAFLEUR. C. F. MARTIN.

ASSOCIATE PROFESSOR:—W. F. HAMILTON.

LECTURERS:— A. A. BRUÈRE. A. H. GORDON. J. C. MEAKINS. C. A. PETERS. H. B. CUSHING.

LECTURERS IN CLINICAL NEUROLOGY:— D. A. SHIRRES. C. K. RUSSEL.

DEMONSTRATORS:— F. M. FRY. C. F. WYLDE. A. A. ROBERTSON. J. G. BROWNE. J. KAUFMANN. D. W. MCKECHNIE. C. F. MOFFATT. R. H. M. HARDISTY. GEO. SHANKS. D. G. CAMPBELL.

ASSISTANT DEMONSTRATORS:— W. W. FRANCIS. L. S. FOSTER. T. F. COTTON. J. A. C. TULL. A. H. MACCORDICK. H. A. SIMS. G. S. MUNDIE. A. G. MORPHY. E. E. ROBBINS. C. C. BIRCHARD. C. R. BOURNE. D. MACCALLUM. D. L. MENDEL.

A didactic course of forty lectures is given in the fourth year, and deals with the general pathology and treatment of disease. The course is intended as an introduction to clinical work, and is illustrated by museum specimens, plates and diagrams.

Clinical Medicine.

The instruction in clinical medicine is conducted in the theatres, wards, out-patient rooms and laboratories of the Royal Victoria and Montreal General hospitals. It extends throughout the third, fourth and fifth years. In the third year, demonstrations are given to groups of students in the methods of examination, and in normal and abnormal physical signs, in the wards and out-patient departments of the hospitals. This is supplemented by courses in clinical chemistry and microscopy at the College.

In the fourth year, clinical instruction is given in the theatres and out-door departments or wards of the hospitals, as well as in the clinical laboratories.

The fifth year is devoted exclusively to hospital work. Each student is required to personally conduct and record the routine examination of patients assigned to him in the wards of the hospitals. He is also required to carry out the necessary laboratory work in connection with his clinical duties wherever this work may call him. Regular attendance at autopsies is obligatory.

Instruction in the theatres is given on four days of the week. Bedside classes in case reporting and diagnosis are held, as well as a daily ward visit. In addition, clinico-pathological conferences are held each week.

The out-door department of each hospital has a large neurological clinic, which is utilized for instruction in diagnosis treatment.

Special clinics are also devoted to the diseases of children, and groups of students attend in rotation.

Infectious diseases will be demonstrated to groups of students in the fourth and fifth years, the large number of cases under treatment at the Alexandra Hospital being available for this purpose.

Clinical Microscopy.

This course, which is given during the winter term of the third year, is essentially a practical one and is in charge of the professors and teachers connected with the department of Clinical Medicine.

It is a laboratory course, forming part of the third year instruction in Medicine, and is held in the pathological laboratory of the Medical Building. The classes are held twice weekly, each demonstration lasting two hours.

Students are given instruction in the microscopic appearances of the normal and abnormal sediments in the urine, in the preparation and staining of films from pus and sputum for pathogenic bacteria, in the methods of examination of the blood, including the use of the hæmoglobinometer, hæmocytometer, microspectroscope, the determination of the specific gravity, agglutination tests, the examination of fresh films, the preparation of stained blood films and the method of making differential leucocyte counts. The instruction also comprises the microscopic examination of stomach contents and fæces, for the recognition of abnormal cellular elements, fat, blood, bacteria and animal parasites; the examination of exudates and other pathological fluids obtained by puncture, and also the examination of hairs for the parasites of ring-worm and favus.

In addition to this, the student is given an opportunity of examining the various bacteria of importance in clinical medicine and surgery.

Various specimens of special interest, which are found in the hospitals from time to time, are examined as occasion arises at the demonstrations.

SURGERY AND CLINICAL SURGERY.

PROFESSORS:— GEORGE E. ARMSTRONG. J. ALEX. HUTCHISON.

ASSISTANT PROFESSORS:— A. E. GARROW. J. M. ELDER.

LECTURERS IN CLINICAL SURGERY:— KENNETH CAMERON. E. W. ARCHIBALD. W. L. BARLOW. C. B. KEENAN. A. T. BAZIN. E. M. VON EBERTS.

LECTURERS IN ORTHOPAEDIC SURGERY:— W. G. TURNER. A. MCK. FORBES.

LECTURER IN GENITO-URINARY SURGERY:—W. HUTCHISON.

LECTURERS ON ANAESTHESIA:— ———————— W. B. HOWELL.

DEMONSTRATORS OF CLINICAL SURGERY:— A. R. PENNOYER. W. H. P. HILL. C. K. P. HENRY. F. MCKENTY. F. A. C. SCRIMGER. W. J. PATTERSON. F. J. TEES.

DEMONSTRATOR OF ORTHOPAEDIC SURGERY:—J. A. NUTTER.

DEMONSTRATORS OF GENITO-URINARY SURGERY:— F. S. PATCH. R. E. POWELL.

ASSISTANT DEMONSTRATORS OF CLINICAL SURGERY:— L. L. REFORD. F. B. GURD. W. H. SMYTH. GUY JOHNSTON. E. C. LEVINE.

The clinical material in the Montreal General and Royal Victoria hospitals is very large in amount and varied in character. There are about five hundred beds in the two hospitals, and the service is a very active one. It is, therefore, possible to make the teaching in surgery largely clinical and practical.

During the latter part of their third year the students are sent to the out-patient departments of the hospitals for instruction in the methods of examining patients. They are also taught to differentiate the abnormal from the normal, to apply bandages, to do dressings and apply splints.

In their fourth year they attend surgical clinics in the amphitheatres of the hospitals two days in the week. They receive clinical

instruction, witness the reduction of fractures and dislocations and are present during the performance of operations, the details of which are explained and demonstrated. They are also taken into the wards in groups, are taught to observe symptoms, to arrive at a diagnosis and to report cases.

During their fifth year students attend three amphitheatre clinics weekly. Groups of cases are here put before them for comparison. They take part in the examination of patients, in the discussion of symptoms and are encouraged to make an independent diagnosis. They witness the operations performed and have every opportunity to learn technique. In these clinics special attention is given to the consideration of the natural history of the diseases under discussion, as well as the pathogenesis, complications, prognosis and therapeutic indications.

Students, during their fifth year, are expected to do independent work in the wards, studying the cases assigned to them, reading up their cases in the medical library and doing sufficient laboratory work to enable them to make their case reports complete.

The didactic lectures are given in the New Medical Building and are illustrated by a large collection of preparations from the Museum, by plates, diagrams, drawings, and, when available, by fresh specimens.

The didactic lectures deal with the principles of surgery, and rare and unusual diseases and injuries which may not be illustrated in the wards of the hospitals. They are intended to be, so far as possible, complementary to the clinical teaching. In these lectures the student is given a broad general view of surgery, so that he may the more easily and intelligently follow the clinical teaching in the hospitals and more fully appreciate the many problems presented at the bedside.

Practical instruction in the administration of anæsthetics is given to students of the fourth and fifth years in the hospitals, the didactic lectures and laboratory demonstrations being given in the College by the Department of Pharmacology and Therapeutics.

DERMATOLOGY.

LECTURERS:— { W. P. BURNET. / G. G. CAMPBELL.

The course is entirely clinical, consisting of a weekly theatre clinic at the Montreal General Hospital, on specially selected cases, and two outdoor clinics, weekly, by Drs. G. G. Campbell, at the Montreal General Hospital, and W. P. Burnett at the Royal Victoria Hospital, throughout the session. Lantern slides are made use of to illustrate the course; also a large series of coloured plates and photographs.

GYNÆCOLOGY.

PROFESSOR OF OBSTETRICS AND GYNAECOLOGY:—W. W. CHIPMAN.
ASSOCIATE PROFESSOR:—F. A. L. LOCKHART.
ASSISTANT PROFESSOR:—J. R. GOODALL.
LECTURERS:— DAVID PATRICK. H. M. LITTLE. H. C. BURGESS.
DEMONSTRATOR:—J. R. FRASER.

The didactic course consists of about twenty-five lectures given twice weekly during the autumn session. The anatomy and physiology of the organs and parts concerned are first discussed. Then the various methods of examination are fully described, the necessary instruments exhibited, and their uses explained. The lectures are illustrated as fully as possibly by drawings, morbid specimens and lantern slides.

Clinical teaching, including out-patient and bedside instruction, is given at both the Royal Victoria and Montreal General hospitals by Professors Chipman, Lockhart and Goodall, assisted by Drs. Patrick, Little and Burgess. A large amount of clinical material is thus available for practical instruction in this department of medicine. Numerous operations are done before the class and made the subjects of remarks. In addition to the ward-patients, each hospital conducts a large out-patient gynæcological clinic, to which advanced students are admitted in rotation, and instructed in digital and bi-manual examination and in the use of instruments for diagnosis.

Particular attention is thus given to clinical instruction, and a clinical examination in gynæcology, similar to that held in medicine and surgery, forms part of the final examination.

HISTORY OF MEDICINE.

PROFESSOR:—ANDREW MACPHAIL.

A course of twelve lectures will be given upon the history of medicine to all undergraduates in the Faculty who desire to inform themselves upon the progress of the science. It is the intention to examine the causes which produced the varying conceptions of medicine in times past, rather than burden the student with a narration of facts and a recital of biographies.

MENTAL DISEASES.

PROFESSOR:—T. J. W. BURGESS.
LECTURER:—C. A. PORTEOUS.

This course comprises a series of lectures at the University on insanity in its various forms. The several types of mental diseases are illustrated by cases in the Verdun Hospital, where clinical instruc-

tion is given to groups of senior students at the close of the didactic lectures.

After clinical instruction each student is required to examine a number of cases of mental diseases for himself, making written reports thereon, and this is followed by a discussion in which the major points relative to such cases are explained

A clinical as well as a written examination is held.

OBSTETRICS.

PROFESSOR OF OBSTETRICS AND GYNAECOLOGY:—W. W. CHIPMAN.
ASSOCIATE PROFESSOR:—D. J. EVANS.
ASSISTANT PROFESSOR:—H. M. LITTLE.
LECTURERS:—J. R. GOODALL. H. C. BURGESS. H. R. D. GRAY. J. W. DUNCAN.
DEMONSTRATOR:—J. R. FRASER.

This course will embrace: (1) Lectures on the principles and practice of the obstetric art, illustrated by diagrams, fresh and preserved specimens, the artificial pelvis, complete sets of models illustrating the deformities of the pelvis, wax preparations, bronze mechanical pelvis, etc.; (2) bedside instruction in the Montreal Maternity, including external palpation, pelvimetry, the management and after-treatment of cases; (3) a complete course on obstetric operations with the Tarnier-Budin phantom; (4) the diseases of infancy; (5) a course of individual clinical instruction at the Montreal Maternity Hospital.

The course is carefully graded and instruction will be given separately to students of the fourth and fifth years.

Particular attention is given to clinical instruction, and a clinical examination similar to that held in medicine and surgery forms an important part of the final examination.

A few lectures will be given on diseases of the new-born, supplemented by clinical demonstration and ward work. The lecturers and demonstrators will give special courses from time to time in the college and in the hospital, and will take the students in groups for the purpose of demonstration, examination and review.

In the fourth year will be given the regular course of didactic lectures.

The fifth year will be devoted mainly to practical and clinical work in the wards of the Montreal Maternity and in its externe service. Palpation on the living subject, theatre clinics, ward clinics, and individual instruction in the management of labour and the care of the puerperal patients will be the chief features of the course.

OPHTHALMOLOGY.

PROFESSOR:—J. W. STIRLING.

LECTURERS:— W. G. M. BYERS. G. H. MATHEWSON.

DEMONSTRATORS:— F. T. TOOKE. S. H. MCKEE.

ASSISTANT DEMONSTRATORS:— A. G. MCAULEY. J. MACMILLAN. J. ROSENBAUM.

In the fourth year there is a didactic course of about ten lectures delivered at the University. The more unusual diseases of the eye are fully described, while the commoner diseases are merely touched on, the fuller consideration of the latter being reserved for the clinical lectures to be delivered in the fifth year. In addition, in the fourth year there is instruction in the anatomy of the eye, the methods of examination, and the use of the ophthalmoscope and the elements of refraction.

In the fifth year there is a regular bi-weekly course of clinical lectures at the Royal Victoria and Montreal General hospitals.

The operative work in eye surgery is fully open to undergraduates on the day set apart for the purpose.

OTO-LARYNGOLOGY.

PROFESSOR:—H. S. BIRKETT.

LECTURER IN RHINOLOGY AND LARYNGOLOGY:—H. D. HAMILTON.

LECTURER IN OTOLOGY:—G. H. MATHEWSON.

LECTURER IN RHINOLOGY AND LARYNGOLOGY:—R. H. CRAIG.

DEMONSTRATORS OF OTO-LARYNGOLOGY:— H. S. MUCKLESTON. HAMILTON WHITE. J. T. ROGERS.

ASSISTANT DEMONSTRATOR OF OTO-LARYNGOLOGY:—D. H. BALLON.

The course of instruction in oto-laryngology is carried on in the out-patients' department of both the Royal Victoria and the Montreal General hospitals, where, owing to the large clinics, the students are afforded ample opportunity of receiving a thorough instruction in these subjects. The course is carried or in both the fourth and fifth years. In the fourth year, in addition to a short course of didactic lectures, the students receive instruction in: (a) The normal anatomy of the ear, nose and throat, as exemplified in moist dissections, dried specimens, models, stereoscopic plates and radiograms of normal conditions of the accessory sinuses of the nose and mastoid process; (b) the method of using the various instruments for examining the ear, nose and throat; (c) the usual tests for hearing; (d) the recognition of normal conditions of these special organs, as exemplified by clinical material.

In the fifth year the students have presented to them only pathological conditions affecting these organs. As many cases as is possible are brought forward to illustrate the various diseases, and the clinical material thus presented is dealt with by a clinical lecture, and is further enlarged by gross pathological specimens, microscopical material and lantern slides. Eight to ten didactic lectures are also given.

In this year the student also receives instruction as to the care of the deaf mute, the subject being dealt with by a lecture and practical illustration of the methods of educating these unfortunate children in the Mackay Institution for Deaf Mutes.

The courses are conducted in small classes, so that personal supervision is accorded to each student. The clinics are held twice a week, and continued throughout each session. An examination at the end of the fourth year will be only clinical, but that at the end of the fifth year will be both written and clinical. A position as resident house-surgeon in the department of oto-laryngology in the Royal Victoria Hospital is open to the members of the graduating class.

GRADUATE AND ADVANCED COURSES.

These courses are almost entirely clinical in character and are given in the Montreal General, the Royal Victoria and the Montreal Maternity hospitals. Owing to the departure of many of its post-graduate teachers for service in the war, the Faculty is compelled to omit the regular course for this year.

Commodious laboratories for advanced work have been equipped in connection with the Pathological and Clinical Departments of both the Royal Victoria and Montreal General hospitals, and in connection with the college laboratories for physiology, chemistry, pathology and pharmacology.

Recent graduates of recognized universities desiring to qualify for examinations by advanced laboratory courses, or who wish to engage in special research, may enter at any time by giving notice, stating the course desired and the time at their disposal.

All the regular clinics and demonstrations of both hospitals will be open to such students on the same conditions as to undergraduates in Medicine of this University.

Further details regarding courses, fees, etc., may be obtained on application to the Registrar of the Medical Faculty.

SPECIAL COURSES IN HYGIENE.

The special courses given in the Department of Hygiene, leading to the Diploma of Public Health; also for engineers, architects, and those wishing to include this subject in their final examination for the degree of Doctor of Philosophy (Ph.D.) have been withdrawn during the period of the war.

DENTAL DEPARTMENT.

GENERAL ANNOUNCEMENT.

In the autumn of 1903 the Dental Association of the Province of Quebec approached the University, asking that a dental department be instituted in connection with the Medical Faculty, and, as a result of negotiations continuing through the session of 1903-04, the University has established such a department. This department is not independent, but is a section of the Medical Faculty.

Under the regulations that have been established governing the Dental Department, students may register in dentistry after passing the matriculation required of students of medicine in McGill University; but those wishing to practise in the Province of Quebec, except those who hold a degree in Arts from a recognized British or Canadian university, must pass the matriculation examination of the College of Dental Surgeons of the Province of Quebec.

The course demanded of students in this department extends over four years and leads up to the degree of D.D.S. In the first year the curriculum is that demanded of students in the Medical Faculty for the same period, with the addition of short courses in dental histology and dental anatomy. In the second year, students of dentistry finish their course in anatomy at Christmas; the course in chemistry is not so extensive as for the medical student, and special lectures are given in physiology, pharmacology and histology. There are also courses in operative dental technique, prosthetic technique and dental anatomy for second-year students. The practical work of the last two years is conducted in the laboratories of the Dental Department in the College and in the dental clinic of the Montreal General Hospital. Special courses of lectures are delivered at the McGill Medical College.

CLINICAL INSTRUCTION.

The establishment of an out-patient clinic in dentistry by the authorities of the Montreal General Hospital has enabled the University to offer its students an abundance of clinical material. During the third and fourth years the greater part of the student's time is spent in the clinic, where he receives the personal attention of a competent staff of instructors.

REQUIREMENTS FOR THE DEGREE.

The degree of Doctor of Dental Surgery (D.D.S.) will be conferred by McGill University on any student who has fulfilled the following requirements:—

1. He must be of the full age of 21 years.
2. He must be of good moral character.
3. He must have passed all required examinations.
4. He must have completed the full term of four years.
5. He must have paid all fees.

For full particulars of the Dental Department, consult the special catalogue of the Department, a copy of which will be sent on application to Dr. J. W. Scane, Registrar Medical Faculty.

DEPARTMENT OF PHARMACY.

Particulars regarding the Department of Pharmacy are given in a separate announcement, which can be obtained on application to the Registrar of the Faculty of Medicine.

DEPARTMENT OF MUSIC.

LOCAL EXAMINATIONS.

Public local examinations are held yearly at various centres throughout the Dominion by examiners sent out by the University.

These examinations may be looked upon as preparatory to the examinations for diplomas and degrees in Music granted by the University. There are in most of the subjects five grades, and certificates gained in the higher grades will exempt the candidate from certain portions of the examinations for a diploma or degree.

DIPLOMA OF LICENTIATE IN MUSIC.

Candidates for this diploma may elect to be examined in one of the following:—

Theoretical subjects and composition.....(Class I)
Practical subjects as performers.....(Class II)
Both theory and practice as teachers.....(Class III)

The candidate must pass three examinations.

First examination:—

(a) Rudiments of music, including sight reading and ear tests.
(b) Harmony in four parts up to, and including, dominant 9th. (A practical test will be substituted for performers.)
(c) Counterpoint in two parts. (Practical test substituted for performers.)
(d) Chief subject of study.

The possession of the Highest Grade certificate of the local theoretical examinations will exempt candidates in Class I from this examination. In Class II, exemption may be claimed if the candidate has passed the Highest Grade (practical) and the Senior or the Intermediate Grade (theoretical) of the local examinations.

In Class III candidates must hold the Senior Grade (theoretical) and the Highest Grade (practical) certificates in order to claim exemption.

In the *Second and Third examinations,* between which a year must elapse, the requirements for Classes I and III are, on general lines, similar to those for the first and second Mus. Bac. examinations respectively. In the case of Class II, practical tests are substituted for many of the theoretical tests. Candidates in Class III will, in the final examination, have to pass in "The Art of Teaching Music," which will be partly *viva voce* and partly paper work.

In both the Licentiate and Mus. Bac. examinations, considerable latitude is allowed in the choice of a second practical study. Total exemption from examination in it will be allowed if the candidate possesses recent certificates gained in the higher grades of the local examinations in that subject.

Those holding the diploma of L. Mus. can at any time during the five years immediately following their passing that examination enter for the Mus. Bac. final examination, but they must pass the matriculation examination.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF MUSIC.

Candidates for the degree must have passed the following examinations:—

1. The Matriculation Examination. (See page 50.)
2. The First Examination in Music, at the end of the first year.
3. The Second Examination in Music, at the end of the second year.
4. The Final Examination.

The particulars of the work for each of the above examinations are as follows:—

First Examination in Music:—

(a) Advanced rudiments.
(b) Harmony in 3 and 4 parts.
(c) Counterpoint up to 3 parts.
(d) Form and analysis. Questions will be given on accent, cadence, metre, rhythm, phrasing, etc., and on form, shown in the work of the early classicists (Scarlatti, Bach, Mozart and Haydn).
(e) General outlines of musical history.
(f) Chief and second practical study (or instead of one of these the composition of a song (or songs) or a miniature suite for piano (or violin and piano or any other combination).

Second Examination in Music:—

(a) Harmony in not more than 4 parts.
(b) Counterpoint in not more than 4 parts.
(c) Canon in 2 parts and fugal exposition up to 4 parts.
(d) History of music from the 16th century to the present day.
(e) Form and analysis. The candidate must show an intimate knowledge of a few compositions, the names of which will be supplied on application, at least three months before the date of examination.

(f) Elementary knowledge of acoustics, or physiology of voice.
(g) Chief and second practical study, or, instead of one of these, the composition of:—(1) A movement in sonata form for pianoforte (or piano and violin, or any other combination), or (2) chorus with independent accompaniment, or (3) suite for strings.

Final Examination in Music.

(a) Harmony up to 5 parts.
(b) Counterpoint up to 5 parts.
(c) Double counterpoint in 8vo., 10th, and 12th.
(d) Canon and fugue in 4 parts.
(e) History of music from the earliest to the present time.
(f) Form and analysis. A knowledge will be required of such works as the following:—Bach's 48 Preludes and Fugues, Beethoven's Sonatas, Schubert, Schumann and Brahms' Songs, Mendelssohn's Psalms and such Oratorios as Elijah and St. Paul. (The candidate should send in a list of works, in which he or she is prepared to be examined, a few weeks before the day of examination.)
(g) Instrumentation—a knowledge of the compass and capabilities of all instruments in the modern orchestra, and the scoring of a given passage in a given time, also the reading at sight of a short excerpt from an easy score of an early work by Mozart or Beethoven.
(h) Chief and second practical study (or in lieu of both of these a composition can be sent in by the candidate containing 4-part chorus, a solo or duet, an unaccompanied quartette and a 4-part fugue—the whole scored for stringed instruments with independent accompaniment).

Graduates (those holding the degree of Bachelor of Music) of other Universities can be admitted to an *ad eundem* degree of Bachelor of Music at this University if they are proceeding to the McGill degree of Mus. Doc. and have satisfied the University authorities in all requirements and paid the necessary fees for the same.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF MUSIC.

Bachelors of Music of McGill University, after the lapse of a period of three years from the time of taking the degree of Bachelor of Music, may proceed to the degree of Doctor of Music, the requirement for which is a composition in extended form, such as an oratorio, opera or cantata. This exercise must have as its first number an introductory orchestral movement in the usual concert-overture form,

and must contain eight-part writing and fugal treatment. It must be scored for a full orchestra. This original and unaided composition, if approved of, may be publicly performed by the candidate in the University or some other fit and proper place, at the discretion of the University. In addition, an examination in the higher forms of composition shall be necessary, together with a critical knowledge of the full scores of certain prescribed works.

Further particulars with regard to degrees and diplomas in Music, as well as those relating to local examinations not included in the above, will be found in the special Music Syllabus obtainable on application to the secretary of the McGill University Conservatorium of Music.

DEPARTMENT OF PHYSICAL EDUCATION.

FOR MEN.

Medical Director of Physical Education:—F. W. Harvey, B.A., M.D.

Physical Director:—Arthur L. Walsh.

All students on entering the University are required to pass a physical examination (see page 65). By such an examination any physical defect or weakness may be discovered early, and the student will be advised with regard to treatment. For those defects amenable to treatment by exercise or other hygienic measures, individual attention will be given and students will be advised as to what forms of exercise will be likely to prove beneficial or harmful.

In view of the gravity of the present situation, military training shall be compulsory for the duration of the war and while the University is without a gymnasium, during the first three years of his course, for every British male student of the University who is declared fit by the Medical Officer.

Students who are not British subjects will be governed by the following regulations:—

At the time of the physical examination students entering the first year will be given a card to fill up calling for information as to the forms of physical work or exercise they have been accustomed to take. They will be asked to state also what forms of physical activities they desire to follow during the college term, whether gymnastics, military drill, or athletics, including games. A complete list of the various forms of college sports will be given, from which a choice may be made.

A classification of students will be made as follows:—

Class A.—Men eligible for all forms of physical exercise.

Class B.—Men eligible only for certain forms, *e.g.*, those who may be unfit for such strenuous games as football or water polo, but who may play tennis, basket ball, and certain other games which will be indicated.

Class C.—Those not eligible for any form of competitive athletics. Many students of this class will be found, on their subsequent examination, to have made sufficient improvement for advancement into a higher grade.

Gymnastic Course.—Gymnastic classes will be held twice a week for all students who are not engaged in competitive athletics or military drill. Students participating in competitive work will not be required to attend the regular gymnastic classes during the active

season for such competitions. A carefully graded and progressive course of exercises will be given to promote organic vigour, neuro-muscular control and general physical efficiency and the physical development of the student. Special attention is given to the application of exercise in cases of weakness or deformity.

The Wicksteed silver and bronze medals for physical culture (the gift of the late Dr. R. J. Wicksteed) are offered for competition to students of the graduating class and to students who have had instruction in the gymnasium for two sessions; the silver medal to the former, the bronze medal to the latter. The award of these medals is made by judges appointed by the Corporation of the University. Every competitor for the silver medal is required to lodge with the judges, before the examination, a certificate of good standing in the graduating class, signed by the Dean or Registrar of the Faculty to which he belongs, and the medal will not be awarded to any student who may fail in his examination for the degree.

STRATHCONA CERTIFICATE COURSE.

The Departments of Education (see page 148) and Physical Education offer the following course:—

FOR MEN AND WOMEN UNDERGRADUATES OF THE FOURTH YEAR.

A course of 20 lessons of 1½ hours each on the principles and practice of physical education. The course will cover elementary anatomy, physiology and hygiene, the theory of gymnastics and class teachings. Miss Cartwright, Mr. ————

Students who satisfactorily complete this course are entitled to certificate "B" of the Strathcona Trust, and their work is included in the requirements for the First Class Academy Diploma of the Province of Quebec.

FOR WOMEN.

(ROYAL VICTORIA COLLEGE.)

Medical Director of Physical Education:—F. W. Harvey, B.A., M.D.

Physical Director:—Miss E. M. Cartwright, Graduate and former Assistant of the Chelsea College of Physical Education, London, England.

Classes in educational gymnastics are conducted for all undergraduates of the College and also for resident partial students, in the gymnasium of the Royal Victoria College (see page 317). All students on entering the University are required to pass a physical examination (see regulation on page 65) and are also required to pass satisfactory physical tests before taking part in any of the outdoor or

indoor physical exercises organised by the Physical Department, whether educational, remedial or recreational.

Work in the Physical Education Department throughout the four-year course (amounting to 140 hours in all) is required of all undergraduate students.* These periods will be used for instruction in personal hygiene and for educational, remedial and recreative gymnastics, according to the physical requirements of the individual. No student will be asked to do work unsuited to her physique, and students debarred from exercise of any kind will be dealt with separately and carefully advised.

Partial students are admitted to the classes in educational and recreative gymnastics on payment of special fees.

Reports of attendance in physical education will be regularly sent to the Faculty.

Strathcona Prizes.—Three first prizes of $8, $10, and $12, and three second prizes of $5, $6, $9, are open to students for competition in the second, third and fourth years respectively. Two prizes of $5 are offered for competition to the students of the first year; one for students who have taken part in educational gymnastics at school, and the other for students who have had no previous physical training.

All competitions will be held under the following regulations:—

1. Competitors will be awarded 50 per cent. of the marks on the work of the session.

2. No prize shall be awarded unless the judges consider the work up to a standard of 75 per cent.

3. The prizes shall not be awarded in the second, third and fourth years should the winner fail to obtain her full academic standing. The prizes in the first year shall not be awarded if the winners fail in more than one subject at the sessional examinations.

4. Competitors will be judged on the work taught in the Physical Education Department during the session, the Physical Director arranging all details concerning the competition. A programme of the competitions will be posted not later than March 1st.

5. Judges for these competitions shall be appointed yearly by the Corporation, on the recommendation of the Department.

STRATHCONA CERTIFICATE COURSE.

See page 296.

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* In all cases of absence the student is required to report to the Physical Director. The ordinary interpretation of the one-eighth rule concerning absences does not apply in this Department. Every student is required to wear the costume recommended by the Department.

McGILL SCHOOL OF PHYSICAL EDUCATION.

This school was founded under the Teachers' Training Committee in June, 1912, to train teachers of physical education for school work, recreational and social work.

In 1914 a course was added in massage and remedial gymnastics to meet the growing demand for trained masseuses, especially in view of the urgent needs of returned wounded soldiers.

The courses provide a thorough all round training extending over two years, but they are independent, and for the present either may be taken separately.

Staff:—Miss Cartwright, Dr. Harvey, Prof. Dale, Miss Henry, Miss Hodges, Dr. F. B. Jones, Dr. Lamb, Dr. McTaggart, Miss MacCallum, Miss Oughtred, Mr. Powter, Prof. Simpson, Dr. Norman Brown, Miss Finley, Miss Fisher, Mrs. Hay, Dr. Robertson.

COURSE I. EDUCATIONAL COURSE.

Practice in Teaching. Great stress is laid on the practice of teaching. Owing to exceptional facilities, every student will be given the opportunity to conduct classes, games and dances, with helpful supervision from expert teachers.

Entrance Requirements. It is highly desirable that the teachers of Physical Education shall have reached a good standard of general culture, hence the following will be required for entrance to the course:—High School Leaving Certificate, or Matriculation, or the Model Diploma of the Province of Quebec, or equivalent qualification, at the discretion of the Committee.

Medical Examination. All students will be required to pass a satisfactory physical examination before proceeding with the course.

Diploma. Examinations will be held in all regular subjects and certificates will be granted at the end of each year for work done. Fifty per cent. required to pass; 60 per cent. for second class; 75 per cent. for first class; but in all cases at least 60 per cent. must be made on teaching. The Diploma, granted on successful completion of the course, is recognized by the Protestant Board of School Commissioners of Montreal as qualifying for the salary of specialist in the public schools.

COURSE II. MASSAGE AND REMEDIAL GYMNASTICS.

(For Hospital and Private Work.)

Course II—offered Session 1914-1915 for the first time—is intended to meet the growing demand for experts in this important branch of physical work. The knowledge of massage, remedial gymnastics and the various forms of physical therapy is more and more recognized

as necessary in medical and educational practice. It has proved of the utmost value in the treatment of convalescent soldiers.

The Course will be of special value to graduate nurses who wish to obtain additional qualifications, and to those engaged in physical education.

The treatment of postural and other defects of school children cannot be effectively carried out in large gymnastic classes, but should be supplied by experts who can give individual attention to such cases.

SUBJECTS.

Courses I. and II.	Course I. only.
Anatomy (general and applied)	Educational Gymnastics
Physiology	Games
Physiology of exercise	Dancing and Folk dancing
Hygiene (Personal, school and public)	Class management and teaching
Theory of Movement	Remedial Gymnastics
Anthropometry	History of Physical Education
Physical Diagnosis	Educational Psychology
First Aid	Psychology of Play
Heredity and Evolution	Swimming and Life-saving

Course II. only.

Theory and Practice of Massage and Medical Gymnastics
Electro-therapy, Mechano-therapy, Photo-therapy, Hydro-therapy
Elementary Educational Gymnastics

PLAYGROUND SUPERVISION.

No special course is offered, but graduates of Course I who have taken handwork and kindergarten games in addition to their courses are fully equipped to undertake the supervision of playgrounds. Classes in these subjects are offered by the Teachers' Training Committee.

For full particulars of all courses see syllabus, to be obtained from the Registrar.

MILITARY TRAINING.

COURSE IN MILITARY SCIENCE.

The course in military science may be taken by undergraduates in Arts, Applied Science or Law.

The subjects covered by the complete course and the marks allotted thereto are as follows:—

		Lectures.	Demonstrations.	Marks.
Group A—1.	Military History and Strategy (2 papers)	24	..	1,000
	2. Tactics (2 papers)	24	..	1,500
Group B.—3.	Field Engineering (2 papers).	24	6	1,000
	4. Map Reading and Field Sketching (1 paper and a practical test)	12	6	500
Group C.—5.	Military Administration and Organization (1 paper).....	12	..	250

Note.—"Marks" assigned above refer to the War Office schedule.

The syllabus to be followed in these subjects will be that laid down in the "Regulations under which Commissions in the Regular Army may be obtained by University Candidates, 1912," but it may not be possible to give all three groups of subjects in any one year.

A candidate who so desires may take up the written examination in three parts, and for this reason the subjects are divided into three groups, as shown above. The examinations may be taken at any time before graduation.

Examinations will be held twice yearly, at dates which will be duly announced and bulletined by the Registrar.

Candidates wishing to take any of the examinations will inform the Registrar, in writing, by the 15th December for a spring examination and by 15th June for an autumn examination.

To qualify, a candidate must obtain 40 per cent. in each paper of Groups A and B, and 50 per cent. in the aggregate marks allotted to each group (A, B and C). Where, however, the three groups are taken together at one examination, a candidate may be considered

to have qualified if he obtains 40 per cent. in each paper and 50 per cent. of the aggregate marks allotted to the whole examination.

A candidate who fails in one paper only of a group, but who obtains 50 per cent. in the aggregate of the remaining papers of the group, will be re-examined in that paper only. When that paper is taken on re-examination, a candidate will, to complete his qualification in the group, be required to obtain 50 per cent. in that paper. Such a paper must be taken up with any remaining group, paper, or papers, in which the candidate has yet to qualify.

A candidate who fails in more than one paper of a group, or in the aggregate of a group, will be re-examined in the whole of that group.

UNIVERSITY CREDITS.

In the Faculty of Arts the subject of Military History and Strategy with any other subject in group A or B is counted as a half-course in the third or fourth year. In the Faculty of Applied Science an alternative is allowed in the fourth year between groups B and C and certain selected subjects in the several courses (see pp. 179 to 191). Students in the Faculty of Applied Science are advised to attend the lectures in this course. Marks in the Faculty schedule have been assigned on the same basis as that adopted for the obligatory subjects for a degree, and the marks obtained by a student will be taken into consideration in determining his standing at the close of the session, as is done in the case of other alternative subjects.

A student obtaining 50 per cent. in group B-3, Field Engineering, will be considered to have qualified in sub-head (d) "Field Engineering" as required for qualification for the rank of Lieutenant in the Canadian Engineers of the Active Militia, and, should he join the Canadian Engineers as a Lieutenant, he will not be required to qualify again in that one sub-head, but the fact that he qualifies from a University standpoint in Military Engineering, 400, does not entitle him to a certificate of partial qualification in sub-head (d) unless he obtains 50 per cent. in Group B-3, as stated above.

CANADIAN OFFICERS' TRAINING CORPS.

(McGill University Contingent.)

In order to provide undergraduates with practical military training, a contingent of the Canadian Officers' Training Corps has been organized at McGill University. Students are thus afforded an opportunity for preparing themselves for service as officers in the Canadian Militia. The contingent is a unit of the active militia, being governed by special regulations, under which it cannot be called out for active service as a unit.

The training is intended to bring the largest possible number of students up to the standard required for two certificates (A and B) of proficiency. The value of these certificates lies in their being a guarantee of consecutive training for two or more years, of a nature calculated to produce good officers. If a member, who is in possession of a certificate, is recommended for a commission in the Active Militia, this certificate entitles him to rank as an officer without any further qualification, and also to certain other advantages.

To obtain a Certificate (A or B) a member must complete two years *efficient* service in the corps, and pass the written and oral examinations prescribed for the respective certificates. To be efficient in a given year (1st August to 31st July), a member must have attended 40 parades if in his first year of service, or 25 parades if in a subsequent year, and must have completed the prescribed course of musketry. The time required is about two hours per week each session.

Each member, upon joining the contingent, will be required to deposit the sum of $5.00 with the Adjutant; for which a receipt will be given. This money will be refunded if the member becomes efficient; otherwise, it will go into the funds of the contingent.

The training in the corps is of such a nature that all students are recommended to join. Enlistment is, however, purely voluntary.

MILITARY DRILL.

In view of the gravity of the present situation, military training will be compulsory for the duration of the war and while the University is without a gymnasium, during the first three years of his course, for every British male student of the University who is declared fit by the Medical Officer.

COMMISSIONS IN THE REGULAR ARMY.

Commissions in the British regular army are offered each half-year to duly qualified candidates nominated by the University. Students may also qualify for a commission in the Canadian Permanent Force.

All information and conditions are contained in a pamphlet entitled "Regulations under which Commissions in the Regular Army may be obtained by University Candidates, 1912," but these conditions may be modified to a certain extent during the war.

The names of fully qualified candidates desirous of being nominated for a commission will be sent in to the Registrar by the 15th December or the 15th June in each year.

The qualifications required for a commission, in accordance with the Regulations, "1912" are as follows:—

A candidate must:—

(i) Be nominated by a board appointed for that purpose.

(ii) Be between the ages of 21 and 25 on the 15th January, for a winter nomination, or the 15th July, for a summer nomination.

(iii) Be unmarried.

(iv) Be passed by a medical board as medically fit.

(v) Be, in the opinion of the Army Council, in all respects suitable to hold a commission in the Regular Army.

(vi) Obtain a certificate of good conduct from a competent authority of the University.

(vii) Attend for three academic years at the University.

(viii) Take a degree in the Faculty of Arts, Applied Science or Law.

(ix) (If a candidate for a commission in the Royal Artillery.) Produce evidence of having qualified in the mathematical and science subjects set forth in Appendix II of the Regulations.

(x) Attend the course of lectures in Military Science and qualify at the written examination in Military subjects.

(xi) Pass a practical test in Map Reading and Field Sketching as laid down in Appendix III of the Regulations.

(xii) Be an efficient member of the McGill Contingent, Canadian Officers' Training Corps, each year from the date of his registration as a candidate for a commission in the Regular Army.

(xiii) During his residence at the University, be attached to a unit of the Regular Army or the Permanent Force and obtain a satisfactory certificate as to his proficiency.

(a) The attachment will be for a period of six consecutive weeks in the case of a candidate who, by the date of nomination, will have been returned as an efficient member of the Canadian Officers' Training Corps, in two or more years. In cases where efficient service in the C.O.T.C. will not have amounted to two years by the date of nomination, a second period of attachment for six weeks may, on the recommendation of the Nomination Board, be accepted in place of such service.

(b) Before this attachment, a candidate will be required to be a member of the Canadian Officers' Training Corps and to have been instructed in squad drill (as laid down in Infantry Training).

THE GRADUATE SCHOOL.

In the Graduate School are enrolled all the graduate students in the University who are following advanced courses of study in subjects which in the undergraduate work fall within the scope of the Faculties of Arts, Law, and Applied Science.

The Faculty of the Graduate School consists of the professors of the Faculties of Arts, Law, and Applied Science, but the initiative and administration of the School is placed in the hands of a Committee selected mainly from these Faculties and known as the Committee on Graduate Studies. The Chairman of this Committee is the official head of the Graduate School. The advanced courses of study offered in the Graduate School lead to the degrees of Master of Arts, Master of Science, Master of Laws, and Doctor of Philosophy.

Instruction for students of the Graduate School is provided in the following departments of study which at present rank as "Subjects":

Philosophy, including Psychology.
History.
Economics and Political Science.
Greek Language and Literature (including Grecian History).
Latin Language and Literature (including Roman History).
French Language and Literature.
German Language and Literature.
English Language and Literature.
Semitic Studies.
Archæology.
Comparative Philology.
Education.
Mathematics.
Law.
Physics.
Chemistry.
Botany.
Zoology.
Geology and Mineralogy.
Thermodynamics and Theory of Heat Engines.
Theory of Elasticity, Strength of Materials and Theory of Structures.
Hydrodynamics and Hydraulics.
Applied Electricity.
Theory of Machines and Machine Design.
Metallurgy.
Mining.

The requirements for the several degrees in course are as follows:

DEGREE OF MASTER OF ARTS.

1. Candidates must hold the degree of B.A. or B.Sc. (in Arts) from McGill University, or its equivalent.
2. Candidates must have taken
   (*a*) One year of resident graduate study at McGill University; or
   (*b*) If graduates of McGill University, two or more years of private work; the amount of such work required may be stated to be the equivalent of one year of academic study.

3. One, two or three subjects may be taken.

4. One of these subjects shall be designated as the major subject and special attention shall be devoted to it. It must be a subject which the student has already studied in his undergraduate course, and the work required in it will represent an attainment in knowledge far in advance of that required for the B.A. degree. The minor subject, or subjects, may be selected from those of the undergraduate course of the third or fourth year which have not already been taken by the candidate. Not more than one-third of the candidate's time for the year shall be devoted to these subjects. The student shall pass an examination in each of the subjects of his course.

In the case of students of first rank honour standing in mathematics and physics, if the major work is to be in physics, exemption may be granted from part of the required attendance on lecture courses, on the recommendation of the Head of the Department in physics and subject to the approval of the Committee on Graduate Studies.

Candidates holding the ordinary B.A. degree must have taken all the ordinary undergraduate courses, or their equivalents, in the subjects which they select as their major.

5. The student shall also present a thesis on some topic connected with his major subject. The title of his thesis must have been previously submitted to the Committee on Graduate Studies and the Head of the Department concerned for their approval. The thesis must show evidence of distinct ability in dealing with the subject selected, and must also display good literary style.

6. Graduates possessing a Bachelor's degree, who act as demonstrators or tutors in the University for the entire session, may proceed to the degree of M.A., and, in so doing, may, at the discretion of the Department with which they are connected, and the Committee on Graduate Studies, omit a portion of the course of study. They shall, however, be called upon to pass an examination on the course of study which they have followed, and shall in all cases submit the thesis prescribed for that degree. If, however, they desire this year's work to count as one of the three years of study required for the Ph.D. degree, they must make their course of study conform to the Ph.D. requirements.

N.B.—The first year's course of study for the Ph.D. degree will cover the requirements of the M.A. course; but if such a course of study be followed, a thesis must be submitted and approved before the degree of M.A. is conferred. If, however, the student continues his course of study and takes the degree of Ph.D., the degree of M.A. will be conferred with the degree of Ph.D., in which case no special thesis will be required for the former.

DEGREE OF MASTER OF SCIENCE.

1. Candidates must hold the degree of B.A. or B.Sc. from McGill University, or its equivalent.

2. Candidates must have taken
   (*a*) One year of resident graduate study at McGill University; or
   (*b*) If graduates of McGill University, two or more years of private work; the amount of such work required may be stated to be the equivalent of one year of academic study.

3. The course of study followed by the candidate shall be of an advanced character, being the equivalent of that required for the degree of M.A., and shall lie in the domain of pure or applied science. It shall be selected from *one* of the last thirteen subjects in the list given above. Geodesy and ore dressing also constitute subjects in the case of this degree. This course of study must have been previously submitted to the Head of the Department and to the Committee on Graduate Studies and have received their approval.

In the case of students of first rank honour standing in mathematics and physics, if the major work is to be in physics, exemption may be granted from part of the required attendance on lecture courses, on the recommendation of the Head of the Department in physics and subject to the approval of the Committee on Graduate Studies.

4. The candidate shall also present a thesis on some subject connected with his course of study. The title of this thesis must have been previously submitted to the Head of the Department and to the Committee on Graduate Studies and have received their approval. This thesis must show evidence of distinct ability in dealing with the subjects selected and must also display good literary style. It may deal with some special topic, but the course of study followed by the student must cover a much wider field.

5. Graduates possessing a Bachelor's degree who act as demonstrators or tutors in the University for at least one entire session, may proceed to the degree of M.Sc., and, on so doing, may, at the discretion of the Committee on Graduate Studies, omit a portion of the course of study usually required. They shall, however, be called upon to pass an examination on the course of study which they have followed, and shall in all cases submit the thesis prescribed for the degree.

DEGREE OF MASTER OF LAWS (LL.M.).

Candidates must (1) hold the degree of B.C.L. or LL.B., from McGill University, or its equivalent, or be graduates of an approved law school; (2) have pursued for one year a course of resident study at McGill University and must have submitted a thesis of conspicuous merit upon a subject previously approved by the Faculty of Law and by the Committee on Graduate Studies, and must have passed such examination as may be prescribed.

Applications to be admitted to study under this section must be made to the Committee on Graduate Studies, with particulars of the proposed thesis, not later than the 1st of February of the year in which the candidate proposes to enter upon his course of study. A printed or typewritten copy of the thesis must be delivered to the Dean of the Faculty of Law for transmission to the Committee on Graduate Studies not later than the 1st of March of the year in which the candidate proposes to proceed to the degree.

DEGREE OF DOCTOR OF PHILOSOPHY.

1. The candidate for the degree of Doctor of Philosophy must hold the degree of B.A. or B.Sc. from McGill University, or its equivalent.

2. He must have followed a course of at least three years' resident graduate study.

3. He must select one major subject and one minor subject. The minor subject selected must be related to his chief line of work. This minor subject shall have devoted to it about one-quarter of the instruction given during the entire course.

4. The candidate must satisfy the Committee that he has a reading knowledge of both French and German before he will be permitted to enter upon the course of the second year.

5. The examination on the major subjects shall cover not merely the formal courses of instruction which have been taken, but the candidate must show that he possesses a good general knowledge of the whole science or branch of learning which he has selected as his major subject. A similar general, though less detailed, knowledge shall be required in the case of the minor subject.

6. The candidate must also prepare a thesis which must display original scholarship or show marked ability to conduct research. If the thesis be accepted, two hundred printed copies of it must be deposited with the University Librarian before the candidate will receive his diploma.

The University exacts a very high standard in the case of this degree, and at least three years of study are therefore demanded.

A three years' course leading to the degree of Doctor of Philosophy is offered in the following subjects taken as majors:—

Botany.
French.
Philosophy.
Physics.
Chemistry.
Semitic Studies.

Students desiring to proceed to the degree of Doctor of Philosophy in subjects other than those mentioned above may communicate with the Chairman of the Committee on Graduate Studies, to whom also application should be made by all students desiring to follow courses of study in the Graduate School.

DEGREE OF DOCTOR OF CIVIL LAW (D.C.L.).

Any person who has graduated as B.C.L., or as LL.M., from McGill University may after five years from such graduation proceed to the degree of Doctor of Civil Law, provided that he shall have written a thesis on a subject previously approved by the Faculty of Law and by the Committee on Graduate Studies, and that such thesis shall have been adjudged by the Faculty of Law and by the Committee on Graduate Studies to be a valuable contribution to legal science. The candidate may, instead of a thesis, submit to the Committee on Graduate Studies a published book or books dealing in a scientific way with some branch or branches of law, and in that case no previous approval is required. Three printed or type-written copies of the thesis or three copies of the book or books, as the case may be, must be delivered to the Dean of the Faculty of Law for transmission to the Committee on Graduate Studies not later than the 1st February of the year in which the candidate proposes to proceed to the degree.

THESES.

Owing to the fact that in future all theses submitted by successful candidates for higher degrees will be bound and placed in the Redpath Library, candidates for such degrees are advised that the Committee on Graduate Studies will henceforth require all theses to be prepared in a uniform manner and in accordance with the following specifications:—

1st.—The paper is to be of uniform size, about 8¼ x 10 inches, and of substantial quality.

2nd.—The left-hand margin is to have a uniform width of about 1½ inches.

3rd.—All theses should be typewritten, if possible.

4th.—No binding is to be employed, but the loose sheets will be placed in a manilla envelope in the order of their pagination.

All theses for 1918-1919 must be in the hands of the Chairman of the Committee on Graduate Studies on or before April 16th, 1919. No thesis received after this date will be accepted.

REGISTRATION.

Application forms, with an outline of the course to be followed, must be filed with the Secretary, for the approval of the Committee, before the 10th of October each year.

Students whose course extends over more than one year must register at the commencement of each year of their course.

Application forms and registration cards may be obtained from the Secretary of the Committee.

THE UNIVERSITY LIBRARY.

C. H. Gould, B.A., Librarian.

The University Library is under the general management of a Committee of Corporation, consisting of the Principal, Chairman; the Librarian, Secretary; two members of the Board of Governors; one Representative Fellow, appointed by Corporation; two representatives of the Faculty of Arts, elected by the Faculty; one representative of each of the Faculties of Applied Science, Law and Medicine, elected by their respective Faculties; and four other members appointed by Corporation.

The several libraries of the University now contain 159,761 volumes, over 25,000 pamphlets, considerable collections of maps and photographs, and a number of the rarer and more costly monographs and serials which are indispensable for purposes of research; there being now on the shelves over 300 complete files of periodicals and publications of various literary and scientific societies.

Among the special collections possessed by the Library may be mentioned the Mendelssohn Choir Memorial Collection of Works on Music, the T. D. King Collection of Shakespeariana, the Redpath Historical Collection, and the Collection of Canadiana. The nucleus of the latter is formed by the choice library of the late Mr. Frederick Griffin, which he bequeathed to the University about forty years ago. It has been growing ever since, and includes, at the present time, besides numerous manuscripts, an interesting collection of Canadian portraits and autographs.

The Redpath Historical Collection was begun by the late Mr. Peter Redpath soon after he became a Governor of the University. It received substantial yearly additions from him up to the year of his death, after which it was steadily augmented during the remainder of her life by his widow. It is now large and valuable, and affords excellent opportunities for the study of history. Its most striking feature—a series of political, religious and social tracts, for which the first selections were made by the late Professor Henry Morley—was greatly enriched by the late Mrs. Redpath, and at present comprises about 10,000 brochures, dating from 1600 A.D. to the end of the nineteenth century.

A special Architectural collection, to be known as the "Gordon Home Blackader Memorial Library," has been established in honour of Captain Gordon Home Blackader, B.Arch. (McGill), who was

wounded near Ypres on June 2nd, 1916, and died in London on August 20th of the same year.

The Medical Library, directly controlled by the Faculty of Medicine, is the largest of the departmental libraries, and is one of the most complete collections of its kind in the Dominion.

Current periodicals, with Transactions and other Society publications to the number of about 400 in the aggregate, are regularly received by the Library.

Founded in 1900, as a memorial to the late Mr. Hugh McLennan from his children, the Travelling Libraries of McGill University were endowed in 1911, by their founders. These libraries contain, each, from thirty to forty carefully selected volumes; and are sent, on application, and on payment of a nominal fee of $3.00, to schools, to country libraries, to reading-clubs, and to small communities which possess no public library. Regulations and full particulars may be obtained from the Librarian of the University.

Although the Library is maintained primarily for members of the University, the Corporation has provided for admission, upon certain conditions, of such persons as may be approved by the Library Committee. It is the desire of the Committee to make the Library as useful to the entire community as is consistent with the safety of the books and the general interests of the University.

EXTRACTS FROM THE LIBRARY REGULATIONS.

1. The Library is closed on Sundays, and on nine other days during the year. These days, and any variation from the regular hours given below, are noted specifically in the Calendar under the day in question.

The hours of opening are:—

(a) During the session, from 9 a.m. till 6.30 p.m. and from 7.30 till 10.30 p.m. On Saturdays, from 9 a.m. till 5 p.m.

(b) During vacation from 9 a.m. till 5 p.m. On Saturdays, from 9 a.m. till 1 p.m.

2. Students in the Faculties of Arts, Law, and Applied Science are entitled to read in the Library, and may borrow books (subject to the regulations) to the number of three volumes at one time.

3. Students in the Faculty of Medicine, who have paid the Library fee to the Bursar, may read in the Library, and on depositing the sum of $5 with the Bursar, may borrow books on the same conditions as students in other faculties.

4. Graduates in any of the faculties, on making a deposit of $5, are entitled to the use of the Library, subject to the same rules and conditions as students in Arts, Law, or Applied Science.

5. Books may be taken from the Library only after they have been charged at the delivery desk; borrowers who cannot attend personally must sign and date an order, giving the titles of the books desired.

6. Books shelved in the reading-rooms or seminary-rooms must not be taken from the rooms to which they have been assigned; and,

after they have been used, they must be returned promptly by readers to their proper places upon the shelves.

7. Before leaving the Library, readers must return to the attendant at the delivery desk books which they have drawn from the stack for use in the reading-room.

8. All persons using books remain responsible for them so long as the books are charged to them, and borrowers returning books must see that their receipt is properly cancelled.

9. Writing or making any mark upon any book belonging to the Library is unconditionally forbidden. Any person found guilty of wilfully damaging any book in any way shall be excluded from the Library, and shall be debarred from the use thereof for such time as the Library Committee may determine.

10. Damage to or loss of any books, maps, or plates, and injury of library fixtures, must be made good to the satisfaction of the Librarian and the Library Committee.

Damage, loss or injury, when the responsibility cannot be traced, will be made good out of the caution money deposited by the students with the Bursar.

11. Should any borrower fail to return a book upon the date when its return is due, he may be notified by postal card, and be requested to return the book. If the time has not been extended, or the book returned, after a further delay of at most three days, the book may be sent for by special messenger, at the borrower's expense, or may be replaced, and paid for, in the case of a student, out of the caution monies of such student; in the case of graduates or other borrowers, out of their library deposits.

12. Before the close of the session, students in their final year must return uninjured, or replace to the satisfaction of the Librarian, all books which they have borrowed.

13. Silence must be strictly observed in the Library.

14. Infringement of any of the rules of the Library will subject the offender to a suspension of his privileges, or to such other penalty as the nature of the case may require.

THE ROYAL VICTORIA COLLEGE.

Founded and Endowed by the Late Rt. Hon. Baron Strathcona and Mount Royal.

FOUNDATION AND HISTORY.

The College was opened September 4th, 1899.

For many years it had been desired by those interested in the education of women in Montreal, notably by the members of the Women's Education Society, which had, itself, provided lecture courses for women, that the benefits of a Collegiate and University education should be placed within their reach.

In 1884, during the principalship of the late Sir William Dawson, the late Lord Strathcona, then Mr. Donald A. Smith, gave a sum of $50,000, and, in 1887, a further sum of $70,000, to found the Donalda Endowment for the higher education of women, such education to be conducted in the buildings of McGill College, as a distinct course in the Faculty of Arts, with the understanding that as soon as practicable the classes were to be created into a separate college of McGill University, with a building separate from that of McGill College. Under the terms of the Donalda Endowment it was provided that degrees in the Faculty of Arts should be granted to women practically on the same conditions as to men, and that the examinations for such degrees, for classing, honours, prizes and medals should be identical with those for men.

As a result of this generous gift and in accordance with the conditions attached, courses of instruction, identical in subject and in standard with those of the Faculty of Arts, were established for women in 1884. These courses were given in the Arts Building, some of the work of the third and fourth years and of the Honour Courses being conducted in joint classes.

The first graduating class of eight women was presented for the degree of Bachelor of Arts in 1888.

The ultimate object of Lord Strathcona had been the provision of a residential college, and this was realized when the Royal Victoria College was opened in 1899, and formally inaugurated by their Majesties the King and Queen (then Duke and Duchess of York) in 1901.

The College building, surrounded by garden and tennis courts, was erected at a cost of about $400,000 at the head of Union Avenue, upon land adjacent to the University Campus. Its beautiful and

dignified exterior was designed in consistency with a careful and generous internal provision of a comfortable and gracious place of study and dwelling for students and for staff. A Warden and Resident Staff were appointed. With these new and great advantages the instruction provided by the original endowment has been maintained as hitherto, except that the separate classes are held mainly in the College building. Women have continued to prepare for degrees in Arts, including pure science. Through the wisdom of Lord Strathcona, provision was also made for the study of music. Since, however, the establishment of music as a separate department of the University in the Conservatorium of Music, independent instruction in music in the College has ceased, but it still maintains a resident lecturer in this subject, who is also Vice-Director of the Conservatorium. The interest of College students in music is thereby served and provided for. Women students resident in the Royal Victoria College may take degree courses in music at the Conservatorium.

THE COLLEGE BUILDING.

The building provides an academic, administrative and recreational centre for resident and non-resident students. It is situated on Sherbrooke Street in close proximity to the University buildings, and within easy reach of Mount Royal Park. The building is fireproof, and much thought and artistic care have been given to furnishing and decoration.

On the ground floor are the offices of the Administration, including the rooms of the Warden and Secretary, the faculty room, the students' common room, a spacious dining hall, and three lecture rooms. On the first floor are other lecture rooms, the library, reading room, and a handsome assembly hall, which is used for convocation, Conservatorium concerts, and other University purposes. This hall is sometimes lent for purposes that are in harmony with the objects of the College. The gallery, which is reserved exclusively for the use of College students on such occasions, affords the latter many opportunities of educational value. The second and third floors and a small part of the first floor are occupied by the rooms of the Resident Staff and students. Each student has a separate study-bedroom. If accommodation permits, a student may be assigned two rooms, a study and a bedroom. The rooms are completely furnished, and no article of furniture need be brought by the students.

A large gymnasium is provided, fully-equipped with modern requirements. In connection with the gymnasium are bath-rooms and dressing-rooms.

Resident students of music have the use of pianos in two practising rooms and at certain hours in other parts of the building.

The lawn behind the College building provides lawn tennis courts in the summer and a skating rink in the winter. Subject to regulations, the students have the privilege of using the University grounds. Each student paying the Grounds Fee receives a ticket giving admission to the Campus skating rink during certain afternoon hours daily except Saturdays.

ADMISSION AND INSTRUCTION.

The College being a college of McGill University and its students being registered in the Faculty of Arts, they are required to comply with the regulations concerning discipline and instruction, made by the University and Faculty, and, in addition, with such regulations as may be made for the Royal Victoria College.

Undergraduates are required to pass the Matriculation Examination of the University, or an equivalent examination (see pages 43 to 62) and can proceed to the degrees of B.A. and B.Sc. They are required to wear academic dress. Partial students, in order to obtain admission, must pass the matriculation examination in the subject, or subjects, which they wish to take, or, failing this, must be able to satisfy the Head of the Department concerned that they are qualified to proceed with the course.

Students are required to enter on the roll book of the College their names, home addresses, and addresses in Montreal. All students entering the University for the first time are required to present a certificate or other satisfactory evidence of successful vaccination. No student who has an infectious illness or who comes from a house in which there has been an infectious illness within a month, shall enter or return to the College without giving notice and obtaining the consent of the Warden. The health of the resident students is in charge of a competent physician, practising in Montreal, who may be consulted, free of charge, by arrangement with the Warden. Every student applying for admission to residence is required to fill in an entrance form and to forward a medical certificate on a form provided by the College.

Instruction is given by professors and lecturers of the University and lecturers and tutors of the Royal Victoria College, who are also members of the various teaching departments of the Faculty of Arts. Graduate students can proceed to the degrees of M.A., M.Sc. and Ph.D.

Lectures are given in the College or in the University buildings, practical instruction in science being given in the University laboratories. Students are assisted in their studies by the resident staff.

Students of the College have the use of the University Library containing 159,761 volumes. There is also a College Library

comprising works of general literature and the chief stated books required for the University curricula, the Department of Modern Languages being especially well represented. The College Library and Reading Room are open to resident students from 9 a.m. to 11 p.m. and to non-resident students from 9 a.m. to 6 p.m. (on Saturdays from 9 a.m. to 1 p.m.).

The Peter Redpath Museum, containing large collections in mineralogy, palæontology, zoology, botany, archæology, and ethnology, is open to students of the College.

The Warden's business hours are 10 a.m. to 1 p.m.; at other times, by special appointment. She will be glad to meet all students before the opening of the session and to discuss their plan of work then or at any other time during the session.

Applications for admission or for further particulars should be addressed to the Warden, Royal Victoria College, Montreal.

EXHIBITIONS AND SCHOLARSHIPS.

For a statement of the exhibitions and scholarships open to women students of the University, see page 75.

In addition to these, and further to encourage residence within the College walls of students who might otherwise arrange to board in the city, the Warden and Staff are empowered to make nominations in any of the four college years to not more than three additional exhibitions of the value of $100.00 each.

TUITION FEES.

Students (graduate, undergraduate or partial, resident and non-resident) pay the same fees as are charged in the Faculty of Arts. For undergraduate students the fee is $58 (this includes fees for laboratory, library, gymnasium and graduation). For further information, see page 81. Every student pays an Athletics or Grounds fee of $3.00, and undergraduate students the Royal Victoria College Undergraduate Society fee of $2.50. All fees are payable to the Bursar, McGill University, on or before October 10th.

BOARD AND RESIDENCE.

Residence in the College is open to graduate students, undergraduates, conditioned undergraduates, and, in exceptional circumstances, to partial students. Application for residence should be made early as accommodation in the College is limited. The charge for board and residence, in addition to the sessional fee for tuition, is $340 ($140 for room, $200 for board). This may be paid in two equal instalments of $170.00 each in October and January. An additional charge, varying from $50 to $100, is made for the use of a private

sitting-room. Room rent includes all expenses of heat and light (not other electrical attachments, for which fees will be charged). These charges cover the University session from about September 28th to the day after Convocation.

Students of music or others who remain in College until a later date for purposes of instruction, school practice, or examination, are charged an additional fee of $1.50 a day. No additional fee is charged to students returning earlier than September 28th for scholarship, supplemental, or matriculation examinations. With the permission of the Warden, students may remain in residence during the Christmas vacation. They will be required to pay a fee of $1.50 per diem for board and residence.

The charges for tuition and room rent are not subject to remission or reduction under any circumstances. In case of prolonged illness and absence from College for a period of six weeks or more, a proportionate reduction, however, is made in the charge for board.

All fees are payable to the Bursar, McGill University, on or before October 10th. Notice of withdrawal should be given at the close of the session, or not later than September 1st.

PHYSICAL EDUCATION.

The Department is in charge of the Medical Director of Physical Education of McGill, and a graduate of a Physical Education College.

Every student on entering the College is required to pass a physical examination.

The physical education offered to undergraduate students includes educational, remedial and recreative gymnastics.

The educational gymnastics are based on anatomical and physiological laws; the exercises aim at producing the highest degree of health in each individual, and thus contribute to mental as well as to physical efficiency. The course of exercises, which is progressive throughout each session, encourages the harmonious development of the nervous and muscular system, and provides a remedy for incorrect habits of sitting, standing and walking. Special attention is given to the development of the chest, since a good lung capacity is the foundation of a really healthy constitution. A remedial gymnastic course is prescribed for undergraduate students with spinal curvature, or who are physically unfit for ordinary class work.

Work in the Physical Education Department, amounting to 140 hours during the four years' course, is required of all undergraduate students. The periods are used for instruction in personal hygiene and for educational, remedial and recreative gymnastics, according

to the physical requirements of the individual. Attention is given in the senior years to the subject of health problems. No student is asked to do work unsuited to her physique, and students debarred from exercise of any kind are dealt with separately and carefully advised. Reports of attendance in physical education are regularly sent to the Faculty.*

The Physical Director arranges all regulations regarding necessary attendance and the substituting of recreative gymnastics for educational.

Recreative gymnastics, in the form of basketball, tennis, ice-hockey, fancy skating and athletic sports, are organized by the Athletic Association, under the supervision of the Department of Physical Education. All students are examined by the Medical and Physical Directors, and are required to pass satisfactory physical tests before taking part in any of these activities.

Partial students in residence are also required to attend educational gymnastic classes. Educational and recreative gymnastics are open to all partial students on payment of a fee of $5.00 for a class of two periods a week.

Strathcona Prizes are offered in this Department under the conditions mentioned on page 296.

A course of instruction, theoretical and practical, is offered to undergraduates of the fourth year, who are preparing for the Academy Diploma attendance being required by the Department of Education as follows (see page 148) :—

A course of 20 lessons of 1½ hours each on the principles and practice of physical education. The course will cover elementary anatomy, physiology and hygiene, the theory of gymnastics and class teaching.

Students who satisfactorily complete this course are entitled to certificate "B" of the Strathcona Trust, and their work is included in the requirements for the First Class Academy Diploma of the Province of Quebec.

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* In all cases of absence the student is required to report to the Physical Director. The ordinary interpretation of the one-eighth rule concerning absences does not apply in this Department. Every student is required to wear the costume recommended by the Department.

MUSIC.

Students taking courses in music leading to the degree or diploma are eligible for residence in the College.

Instruction in music is offered at the McGill Conservatorium of Music,—Director, Dr. H. C. Perrin; Vice-Director, Miss Clara Lichtenstein, Resident Lecturer in the Royal Victoria College. Students may prepare for the degree examinations in music of the University, or for the Diploma of Licentiate in Music.

For information regarding courses in music, see page 291, and also the separate syllabus issued by the Conservatorium of Music.

COLLEGE SOCIETIES.

The students maintain the following societies:—The Undergraduates' Society, and the Athletic Society, the Delta Sigma Literary and Debating Society, La Société Française, the Young Women's Christian Association.

MACDONALD COLLEGE.

FOUNDATION AND PURPOSE.

Macdonald College, which is incorporated with McGill University, was founded, erected, equipped and endowed by the late Sir William C. Macdonald for the following among other purposes:—

(1) For the advancement of education; for the carrying on of research work and investigation and the dissemination of knowledge; all with particular regard to the interests and needs of the population in rural districts.

(2) To provide suitable and effective training for teachers, and especially for those whose work will directly affect the education in schools in rural districts.

SITUATION AND EXTENT.

The College occupies a beautiful site, overlooking the Ottawa River at Ste. Anne de Bellevue, twenty miles west of Montreal. The main lines of the Grand Trunk and the Canadian Pacific railways pass through the property, and the stations of both railways are within its boundaries.

The College property comprises 786 acres, and has been arranged into four main areas, *viz.*: (1) the campus, with lawn, school garden, and recreation fields for men and women; (2) experimental grounds, with plots for illustration and research in grains, grasses, and other farm crops; (3) the horticultural and poultry departments; and (4) the stock farm.

THE GENERAL ORGANIZATION.

The College is divided into three schools, and a student is enrolled in that one in which the major portion of his work is taken:—

(1) **The School of Agriculture,** which aims to provide a thorough theoretical and practical training in the several branches of agriculture.

(2) **The School for Teachers,** which offers a comprehensive and thoroughly practical training in the art and science of teaching.

(3) **The School of Household Science,** in which young women receive training which will make for the improvement and greater enjoyment of home life and instructs them in professional work in household and institute superintendence and management.

ENTRANCE REQUIREMENTS.

School of Agriculture.

All candidates for admission:—

1. Must have entered upon their eighteenth year;

2. Must produce satisfactory evidence as to moral character, also medical certificate of physical health, including successful vaccination within the six years preceding date of entrance; and

3. Must produce evidence of having worked for a season (seed time to harvest) on a farm, affording a practical knowledge of ordinary farm operations. When it is thought necessary, this knowledge will be tested by a practical examination at entrance or any subsequent date.

All candidates for the one and two-year courses will be required to read and write the English language acceptably, to be proficient in the use of elementary mathematics, and to be acquainted with history and geography, especially of Canada.

A student who applies for admission to the courses leading to a degree will be required:—

(a) To pass, before entrance, an examination in English composition and dictation, English grammar, history and geography, arithmetic and nature study and elementary agriculture.

(b) Before being allowed to proceed with the work of the third year, to have obtained 60 per cent. of the marks in English and 50 per cent. in general proficiency in the examination of the work of the two-year course, and to be granted the permission of the Faculty;

or

(c) To have passed an examination* in the following subjects, up to the requirements for entrance to the other Faculties of McGill University—(1) English, (2) history and geography, (3) Latin or French or German, (4) elementary mathematics, (5) nature study and elementary agriculture, (6) any one of the following: botany, chemistry, physics, zoology.

(d) To have passed an examination in the work of the two-year course, and to have obtained the permission of the Faculty.

School for Teachers.

Teachers to be trained for the schools under the control of the Protestant Committee of the Council of Public Instruction for the Province of Quebec will be admitted under conditions prescribed by that body, particulars concerning which are given in detail in the Announcement of Macdonald College.

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* Certificates of having passed an equivalent examination will be accepted.

School of Household Science.

All candidates for admission:—

1. (a) To the homekeepers' course and short course, must have entered their eighteenth year; and
   (b) To the course in institution administration, must have entered their twenty-third year.

2. Must produce satisfactory evidence as to moral character; also medical certificate of health, including successful vaccination within the six years preceding date of entrance.

3. Must be able to read and write the English language acceptably and be proficient in the use of elementary mathematics. Candidates for the course in institution administration will be submitted to an examination in the above subjects the day after entrance.

LIVING EXPENSES.

The charges for board and lodging are as follows:—

For each occupant of a double room with single beds, per week $6.00

The above charges must be paid strictly in advance, and may be for the whole term, or for four weeks at a time.

Caution Money.—Every student must also, at the time of entrance, make a cash deposit of $5.00 with the Bursar of the College, to cover fines, breakages, etc.; and as soon as any student's deposit is exhausted he or she will be required forthwith to make an additional deposit of the same amount.

FEES.

In the School for Teachers, tuition is free to residents of Quebec.

In the School of Agriculture, tuition is free to students belonging to the farming community of the Province of Quebec in the first two years. For other residents of Canada the fee is $50.00, and for students outside of Canada $100.00.

In the School of Household Science, tuition is free for students belonging to the farming community of the Province of Quebec in the one and two-year courses; for other residents of Canada the fee is $75.00 and for students outside of Canada $100.00 per session.

	Tuition, per session	Laboratory Fee	Caution Money Deposit	4 Weeks Board in Advance*	Doctor's Fee	Laundry Fee	Total
SCHOOL OF AGRICULTURE:—							
First and Second Years:							
Students belonging to the farming community of the Province of Quebec....	Free	$ 5.00	$ 5.00	$ 24.00	$ 3.00	....	$ 37.00
Other residents of Canada.....	$ 50.00	5.00	5.00	24.00	3.00	....	87.00
Students from outside Canada.....	100.00	5.00	5.00	24.00	3.00	....	137.00
Third and Fourth Years:							
Students belonging to the farming community of the Province of Quebec....	50.00	15.00	5.00	24.00	3.00	....	97.00
Other residents of Canada.....	50.00	15.00	5.00	24.00	3.00	....	97.00
Students from outside Canada.....	100.00	15.00	5.00	24.00	3.00	....	147.00
SCHOOL FOR TEACHERS:—							
Students of all classes.....	Free	5.00	5.00	24.00	3.00	$1.00	38.00
SCHOOL OF HOUSEHOLD SCIENCE:—							
Homemaker and Institution Administration Courses:							
Students belonging to the farming community of the Province of Quebec....	Free	10.00	5.00	24.00	3.00	1.00	43.00
Other residents of Canada.....	75.00	10.00	5.00	24.00	3.00	1.00	118.00
Students from outside Canada.....	100.00	10.00	5.00	24.00	3.00	1.00	143.00
Short Courses (per course):							
Students belonging to the farming community of the Province of Quebec....	Free	5.00	5.00	24.00	2.00	....	36.00
Other residents of Canada.....	25.00	5.00	5.00	24.00	2.00	....	61.00
Students from outside Canada.....	25.00	5.00	5.00	24.00	2.00	....	61.00

* Occupants of single rooms are charged 50 cents per week extra. Students in Agriculture from the Province of Quebec receive a grant from the Provincial Government of $7.00 per month of attendance on account of board. See next page.

THE B.S.A. DEGREE.

Students who shall have completed the regular course of study in Agriculture, as laid down in the Announcement of the College, shall have passed the prescribed examinations for graduation, and shall have performed such exercises as may be prescribed to that end—the whole to the satisfaction of the Faculty of Agriculture—shall be entitled to the degree of Bachelor of Science in Agriculture, and the degree, when abbreviated, shall be designated by the letters B.S.A.

COLLEGE ANNOUNCEMENT.

Full details as to the courses, etc., will be found in the Announcement of Macdonald College, which will be sent, on application to the Principal, Macdonald College Post Office, Que.

PROVINCIAL GOVERNMENT GRANTS TO STUDENTS FROM THE PROVINCE OF QUEBEC.

(1) *School of Agriculture.*

The Department of Agriculture of the Province of Quebec grants to each student who belongs to the Province of Quebec $7.00 per month of attendance employed in studying according to the time tables in the School of Agriculture, Macdonald College. This amount will be placed to the credit of such students by the College Bursar and will be applied on account of board and lodging.

(2) *School of Household Science.*

The Provincial Government grants bursaries of $20.00 to $50.00 each to Quebec students from the farming community in the junior and senior years of the School of Household Science.

THE UNIVERSITY BUILDINGS.

The Centre Building.—This is the oldest building of the group. It contains the lecture rooms of the Faculties of Arts and Law, as well as the botanical and zoological laboratories and the offices of the administration.

The Conservatorium of Music is situated at the corner of University and Sherbrooke Streets, adjoining the University grounds. On the ground floor are the offices of the Director and of the Secretary, the library and a concert hall where recitals by the staff and students are given during the session and where orchestral and choral practices are held (the more important concerts take place in the large assembly hall of the Royal Victoria College). The second and third floors contain a number of studios, where lessons are given by the various members of the staff, as well as a room for lectures in theory and history of music, sight-singing, etc. In the basement are several practice rooms.

The New Medical Building.—This building, erected at a cost of over $600,000, stands at the corner of Pine Avenue and University Street. Of the central part of the building the greater portion is set aside for the accommodation of the library, the whole of the front of the second and third floors and a portion of the ground floor being so used. On the third floor is a large students' reading room 76 x 24 feet, exceptionally well lighted and capable of accommodating 100 readers. On this floor also is the staff journal room and the private offices of the librarian. The second floor is occupied by the stack room, with accommodation for sixty thousand volumes, also by individual research and reading rooms. A portion of the ground floor is set aside for storage. Besides the library, the central portion of the building contains also three lecture rooms, the private museum and offices of the professor of anatomy and the administration office, research and preparation rooms of the museum staffs. To the rear of the central building is the museum, probably the most complete structure of its kind in connection with a medical school on this continent. It is built in the form of a cross, three storeys high, splendidly lighted by ample window space on three sides and by a large central light well. Each floor is furnished with free stacks and wall cases made of steel and plate glass, thoroughly dust-proof. The anatomical collections are placed on the third floor, while the first and second floors are devoted to pathology. In both the anatomical and pathological sections of the museum the specimens have been prepared and classified with a view to their being made use of in the teaching of these important subjects. The east wing gives accommodation for the Departments of Anatomy, Pathology and Bacteriology, and the Dental Department, the Faculty rooms and administration offices, the mortuary and preparation room for dissecting material, as well as ample space for students' lockers and lavatories, and a large, well-lighted students' reading and smoking room. On the ground floor of this wing will be found the mortuary, in which there is provision for the storage of 80 subjects, and leading

from this the preparation room. On this floor also is the large locker room, containing 400 steel lockers, the students' lavatory and the students' reading and smoking room, the latter being provided with newspapers and magazines and being under the control of the students themselves. On the first floor is the Faculty room and a series of rooms for administrative work. The northern half of this floor is occupied by the Dental Department, comprising offices, lecture rooms and modern, well-equipped laboratories. The second floor is wholly occupied by the Department of Pathology and Bacteriology. In the southern half is the Professor's private laboratory and office, four research and preparation rooms, a small demonstration theatre and an assistant's room. The northern half is occupied by the students' laboratory, a room 76 x 40 feet, splendidly lighted and equipped with all the necessary apparatus for modern laboratory instruction. The third floor is taken up wholly by the Department of Anatomy and contains besides private offices and research rooms for the Professor and staff, a large dissecting room, 88 x 40 feet, excellently lighted and fully equipped. There is also on this floor a large lavatory and students' locker room. Between the second and third floor is a mezzanine floor which is devoted to the Department of Parasitology. Here, besides the private offices and research rooms of the Professor, there are four fully-equipped laboratories for advanced work. The west wing contains a large assembly hall. The remaining space is occupied by the Departments of Pharmacology and Hygiene.

The Old Medical Building.—The Laboratory or North Wing of the Old Medical Building contains the laboratories for medical chemistry and physiology. The ground floor is set apart for medical chemistry. On the eastern side of the hall is the students' laboratory, 45 by 80 feet, which is well equipped for 100 students. A research laboratory, with eight working places and adjoining professor's room, private balance room, etc., connect with the large laboratory. On the western side of the hall is the lecture room, connected with two preparation rooms, store-rooms and a small bio-chemical museum. The students' balance room and a dark room for polariscopic and photographic work are opposite the main entrance to the chemical laboratory. Laboratory courses in general chemistry of the first year, organic and biological of the second year, and the physiological and clinical chemistry of the third year are given in the large laboratory. All classes are taken in sections. The mezzanine floor contains the lecture room for physiology and a series of laboratories for advanced work in practical physiology. The top floor is devoted entirely to physiology, there being two large laboratories and several smaller research and preparation rooms.

The Macdonald Engineering Building.—This building is designed to provide accommodation for six hundred students. The Departments of Civil Engineering, Architecture and Transportation are permanently provided for, while the Department of Electrical and Mechanical Engineering are given temporary accommodation until such time as independent buildings can be provided for the growing numbers in these departments. The ground floor is given up to the civil engineering, geodetic, electrical and mechanical engineering laboratories and is for the most part 23 feet in height. Mechanical and electrical engineering laboratories and the workshops also occupy the three lower floors of the Workman Building. The centre portion of the second floor is used for purposes of administration (faculty rooms, offices, library, etc.). The front parts of the second and third floors

are occupied by eight class rooms which contain 470 sittings, while the upper floors, both of the Engineering Building and the Workman Building, are devoted to drafting rooms, containing over 500 tables. The building throughout is of the most approved fire-proof construction, not only in the matter of materials, but in arrangement as well, the several floors being divided by fire walls and fire doors into separate sections. It has been erected at a cost of about half a million dollars.

The Macdonald Chemistry and Mining Building.—In addition to the large lecture theatre, which seats about 250 students, there are here four lecture rooms for smaller classes and a number of offices. There are also three large general chemical laboratories (each with a floor space of about 2,400 square feet and accommodation for 200 students at a time), large laboratories for assaying, ore dressing and metallurgy, with a very complete equipment, and a number of smaller rooms and laboratories for special purposes, including research work. The reference library contains about 1,400 volumes.

The Macdonald Physics Building.—This building is five storeys in height, each floor having an area of 8,000 square feet. Besides a lecture theatre and its apparatus rooms, the building includes an elementary laboratory nearly 60 feet square, large special laboratories, a range of rooms for optical work and photography, separate rooms for private work, and two large laboratories arranged for research, provided with solid piers and the usual standard instruments. There are also a lecture room for mathematical physics, a special physical library and convenient workshops. The equipment of the Physics Building is exceedingly valuable and complete.

The Redpath Museum.—The Museum occupies a commanding position at the upper end of the campus, and besides its central hall and other rooms devoted to the collection, it contains a large lecture theatre, class rooms and work rooms. The collections in botany, palæonotology, geology and zoology are very fully and admirably arranged for teaching purposes.

The University Library.—This building is a fine example of the Romanesque style of architecture. The general reading room is 110 feet long, 44 wide and 34 high, and will seat 150 readers. The book stack, four and five storeys in height, has a working capacity of 250,000 volumes. For other information regarding the Library, see page 310.

The Observatory is well equipped for instruction in the use of meteorological instruments and in astronomical work.

The Power Station.—The new Power Station supplies heat to the following buildings: New Medical Building, Old Medical Building, Engineering and Workman Buildings, Chemistry and Mining Buildings, the Physics Building and the Arts Building. It also furnishes current for light and power to these buildings and to the Royal Victoria College, the Union and Strathcona Hall. The equipment of the station includes boilers of 1,000 H.P. nominal capacity, provision being made for future extension, and engines and generators of 600 kilowatt capacity. The coal bunkers hold 500 tons. The heating distribution is partly by tunnel and partly by underground conduit, the farthest building served being at a distance of 700 feet from the station. Electric cables are placed underground in vitrified clay conduits.

The Royal Victoria College.—This is a residential college for the women students of McGill University. It is situated on Sherbrooke Street in close proximity to the University buildings and laboratories.

On the ground floor are the offices of the administration, lecture rooms, students' common room, and a spacious dining hall. A gymnasium is fitted up in the basement. On the first floor are other lecture rooms, the library, reading room and a handsome assembly hall. The second and third floors are given up entirely to rooms for resident students. These rooms are handsomely furnished, as indeed is the whole building. The rates for board and lodging are very reasonable. Full information on all points can be obtained from the Warden. See also page 313.

The McGill Union stands at the corner of Sherbrooke and Victoria Streets, within two minutes' walk of the College gates. The building measures 93 feet by 71 feet and consists of three storeys and a basement. On the main floor are the dining and luncheon rooms; on the second floor, billiard rooms, a news hall, a reading room and library, a study and a lounging gallery (88 ft. by 21 ft.). The large hall is situated in the top storey. It measures 88 ft. by 45 ft. and has a seating capacity of 400. There are also smaller rooms for society meetings, etc. In the basement are baths, locker rooms and an exercise room (24 ft. by 38 ft.). The Union is the social centre of the University, the common meeting ground for students of all faculties. It is intended to promote a broad and true university spirit.

Strathcona Hall is the home of the Young Men's Christian Association of the University. The building is 55 feet by 110 feet, and is five storeys in height. The three upper storeys are arranged to afford residential accommodation for about sixty students. On the ground floor are the secretary's office, sitting rooms, cloak rooms and a hall capable of seating 350 persons. The second floor contains a large reading room, a large game room, and five small rooms for the use of clubs and societies.

LABORATORIES, MUSEUMS AND WORKSHOPS.

1. LABORATORIES.

CEMENT LABORATORIES.

The laboratory is equipped for making complete tests on the strength and properties of cements, mortars, concrete, concrete beams, etc., and includes the following:—Tensile testing machines, hydraulic compression machine (50 ton), specific gravity apparatus, sieves for fineness tests, steaming apparatus, Vicat's and Gilmore's needles, metal moulds, mixers, rammers, balances, etc. Tanks are provided for the storage of briquettes and other test specimens, and the equipment is supplemented by that of the strength of materials laboratory in making tests on large sized specimens.

All engineering students make the standard tests on cements and mortars, and also tests of concrete, plain and reinforced, as part of the instruction in Strength of Materials.

CHEMICAL LABORATORIES.

(In the Chemistry and Mining Building.)

The three principal laboratories have each a floor-space of about 2,400 square feet, and together have accommodation for nearly two hundred students working at a time. They are lighted on three sides, have special ventilation and have ample hood space. Laboratory A is planned for beginners, and the other two for more advanced work; B for quantitative analysis and C for organic preparations and qualitative analysis. In connection with each of the main laboratories is a balance-room equipped with balances by several of the best makers and an instruction room.

Physical chemistry is provided for in a special laboratory, nearly 30 by 40 feet, supplied with electricity, steam, vacuum pumps, etc. The equipment of this laboratory consists of the apparatus necessary for the determination of the specific gravities of solutions, of the depression of freezing point, of the rise of boiling point, and of densities of gases and vapours. There are constant-temperature baths for accurate measurement of solubilities, Kohlrausch's apparatus for determining the electrical conductivity of solutions, and the apparatus necessary for measuring the electromotive forces generated between metals and their solutions, and in voltaic cells generally. There are also calorimeters for measuring the heat effects produced in chemical reactions. On the same floor there is an optical room, devoted more particularly to crystallographic work and furnished with goniometers, polarising microscopes, axial-angle apparatus, refractometers, etc.

Immediately adjoining the laboratory of physical chemistry is the photographic department, supplied with two dark rooms, arranged on the maze system, and provided with the necessary appliances for all ordinary photographic work, including an enlarging camera and apparatus for micro-photography.

The laboratory for gas analysis is fitted with a large tank to contain water at the temperature of the room, for use in obtaining a constant temperature in the measurement of gases. The tables are arranged for work with mercury, and the laboratory is supplied with the apparatus of Hempel, Dittmar, Orsat, Elliot and others. It contains also Fleuss, Boltwood, and Töpler pumps for producing high vacua.

The laboratory for electrolytic analysis is supplied with accumulators, thermophile, platinum electrodes, rheostats, ammeters, voltmeters, etc.

Another room has lately been equipped with electric furnaces and other appliances for electro-chemical work.

The organic department comprises a laboratory for preparations and research, a combustion room for analysis, a dark room for polariscope and saccharimeter work, and a lecture room. The laboratory is fitted with all the necessary apparatus for organic research—special hoods for work with poisonous gases, regulating ovens for digesting and drying at various temperatures, filter presses for the extraction of raw materials, and various forms of apparatus for distillation in vacuo. The dark room is equipped with polariscopes and saccharimeters for sugar work. There is a large supply of the necessary organic chemicals, which are supplied free of charge to students engaged in routine or research work in this department.

The laboratory for industrial chemistry is especially ventilated and fireproofed. Here operations on a semi-commercial scale may be conducted, involving the use of explosive and other dangerous chemicals.

The Chemistry Building is well supplied with small research laboratories for graduate and other research students.

ELECTRICAL LABORATORIES.

The experimental equipment of the electrical department is contained in the fourth year, third year, standardizing, high voltage, oscillograph and photometer laboratories. Power is supplied to these laboratories from the 220-volt, 3-wire, D.C. generators in the central power house. The voltage is maintained approximately constant on the two sides of the system by a balancer set located in the fourth year laboratory, which is also equipped for supplying constant voltage circuits of 125 volts.

The Fourth Year Laboratory is equipped primarily for the study of alternating current phenomena and is equipped with: Motor-driven alternators of various types, giving a range of frequency of from 25 to 250 cycles per sec.; single and polyphase induction motors of the squirrel cage and wound rotor types; single phase series and repulsion motors; constant voltage and constant current transformers; mercury arc rectifier; rotary converters; potential regulators; meters for the measurement of current, voltage, power, frequency, power factor, and wave form; rheostats, circuit breakers, condensers, reactance coils, synchroscopes and other auxiliary apparatus. An electric travelling crane spans the laboratory and gives facilities for the rearrangement of the machines.

The Third Year Laboratory is used by the third year electrical students for the study of current flow in circuits and of direct current machinery. It is also used by the students of other departments who are taking an elementary electrical course, for the study of both

direct and alternating current phenomena. The laboratory is equipped with: Shunt, compound and series wound direct current generators and motors of different types; constant current generators; arc and incandescent lamps; meters for the measurement of current, voltage and power; rheostats, circuit breakers, starters and other auxiliary apparatus. Several small alternators, transformers, rotary converters and induction motors along with the necessary instruments and control apparatus are provided for use by the students taking the general elementary course. A hand-operated travelling crane gives facility for the rearrangement of the machines.

The Standardizing Laboratory is equipped with the accurate measurement of direct currents to 1,000 amperes and voltages to 1,500 and of alternating currents to 200 amperes and voltages to 1,500. By the use of standard instrument transformers, alternating currents to 5,000 amperes and voltages to any reasonable value may be accurately measured. The equipment includes: Kelvin current and watt balancers; Weston laboratory standard ammeters, voltmeters and wattmeters; potentiometers; Wheatstone and conductivity bridges; galvanometers, standard resistances and cells and other special apparatus.

The power is obtained from two motor generator sets, from one of which direct current to 1,000 amperes may be obtained and from the other alternating current may be obtained over a considerable range of frequency up to 1,500 amperes and at any phase relation to voltages up to 440.

The High Voltage Laboratory contains the following equipment: Four 200 to 50,000 volt transformers supplied with condenser bushings and insulated so as to operate up to 300,000 volts; one 200 to 2,000 volt insulating transformer; one 110 to 20,000 volt testing transformer; standard spark gaps for oil and air; cathode ray tubes, electrostatic voltmeters and other auxiliary equipment. The transformers are provided with auxiliary voltage coils for direct pressure measurement and for connection to the oscillograph. The connections to this laboratory are such that any machine in the department may be used as a source of power and controlled directly from the transformer room, so that a wide range of frequency and of wave form is available for experimental work.

The Photometer Laboratory contains a Reichaustahlt type precision photometer bar with a range of certified standard incandescent lamps, hand operated and power driven universal rotators, motor driven sector disk and a complete set of screens, also a Matthew's integrating photometer for incandescent lamps. A Sharp Mollar portable photometer and standardizing set is also installed with a full range of controlling rheostats and instruments provided with permanent wiring.

Oscillograph Laboratory. This is equipped with a Blondel triple oscillograph with both visual and photographic attachments and is specially adapted for the study of transient phenomena. The department maintains a small machine shop for instrument and machine repair and for the construction of special experimental apparatus.

Wireless Telegraph Laboratory.—A permanent aerial, 350 feet in length, of the inverted "L" type, has been installed, with a natural wave length of 600 metres. Waves varying in length from 500 to 8,000 metres can be detected. A number of receiving sets have been loaned to the department and others are being constructed.

FOREST PRODUCTS LABORATORIES OF CANADA.

The Forest Products Laboratories of Canada, established by the Canadian Government in 1913 under the Forestry Branch, Department of the Interior, are associated with McGill University, and are located at 700 University St., Montreal. The primary function of the laboratories is experimental research in the utilization of forest products, as a means toward the improvement of present industrial methods and the extension of commercial opportunities in this field.

There are four operating divisions, for technical research in timber tests, timber physics, pulp and paper and wood preservation. Provision is made for the establishment of other research divisions, as opportunity develops.

The Division of Timber Tests is engaged in the investigation of the mechanical properties of Canadian woods, primarily for the collection of data on the relative strength values of various species, as a basis for classification of timber as structural material and for miscellaneous commercial uses. The testing work of this division is carried out in the Strength of Materials Laboratories of McGill University. By arrangement with the University, provision has been made for the joint use of the Wicksteed, Emery and Riehle testing machines included in the equipment of this University department. The Forest Products Laboratories have installed one 30,000 pound capacity Olsen Universal machine, fitted with attachments of special design to meet the requirements of various testing methods, and one Hatt-Turner impact machine. Accessory apparatus includes deflectometers, compressometers, planimeter and calculating machines for reduction of test results. A saw mill and wood working shop are maintained in connection with this division.

The work of the Division of Timber Physics includes the investigation of the physical properties of wood,—specific gravity, moisture content, rate of growth, etc.—for correlation with mechanical and other characteristics, the microscopic anatomy of wood and study of fibres, and photography. Drying racks, electric ovens and balances are in use for this work, while apparatus for microscopic study includes one Jung-Thoma microtome (Thomson modification), two microscopes, microscopic micrometers and accessory appliances for use in preparation of slides, fibre measurements and other microscopic determinations. The photographic department of the division is provided with a fully equipped dark-room and complete range of photographic apparatus, including special Bausch and Lomb horizontal photomicrographic outfit, cameras and projection lantern.

The Division of Pulp and Paper is engaged in the investigation of the paper-making possibilities of Canadian woods, the practical study of processes related to this field and research in fundamental problems of the chemistry of wood. A complete semi-commercial paper mill has been installed for investigation on a large experimental scale. This equipment includes one single Marx beater, one double Marx beater, one small Jordan engine for refining paper stock; one riffler, one Packer flat screen, and one complete Pusey and Jones paper machine (wire 25 feet by 33 inches). Other equipment includes one complete Erfurt sizing system for preparation of rosin size, two gas fired boilers, small digester and paper testing instruments. Larger digesters, corresponding in capacity to the larger experimental equipment, are planned for future installation. The chemical laboratory of

this department is provided with complete equipment for experimental research in the chemistry of wood.

The Division of Wood Preservation is concerned with the investigation of methods of preservative treatment for the protection of timber against decay and insect destruction. The experimental laboratory of this division is provided with equipment for impregnation of wood with preservatives under pressure. This equipment includes one horizontal retort, 2 feet in diameter and 12 feet long; operating tank of corresponding capacity; one small vertical retort and tank, all designed for high pressure; pumps, air compressor and dry vacuum pump, receivers and condenser. A chemical laboratory in this department is used for analysis of preservatives and examination of treated material. A small laboratory is equipped for experimental studies in wood pathology, which includes the development of cultures of wood destroying fungi, accelerated tests of durability and microscopic examinations.

GEODETIC LABORATORY.

The equipment of this laboratory consists of:—

(1) Linear instruments: a Rogers comparator and standard bar for investigating standards of length; a fifty-foot standard and comparator for standardizing steel bands, chains, tapes, rods, etc.; a Munro-Rogers linear dividing engine.

(2) Circular instruments: a Rogers circular comparator; four level triers.

(3) Time: an astronomical clock and clock circuit in connection with the observatory clocks; chronometers running on mean and sidereal time; chronograph.

(4) Gravity: a portable Bessel's reversible pendulum apparatus with special pendulum clock and telescopic apparatus for observing coincidence by beats.

(5) A water gauge apparatus for testing aneroid barometers.

The laboratory and clock rooms are constructed with double walls and enclosed air spaces, and their heating is controlled by special thermostats, so that the temperature within may be brought to, and held at, any desired degree.

Astronomical Observatory.

The observatory equipment for the purpose of instruction in practical astronomy consists of:—A Bamberg primatic transit with zenith attachment; six astronomical transits for meridian observations; two Troughton & Simms' zenith telescopes; sidereal and mean time clocks and chronometers, chronograph and electrical circuits by which observations and clock comparisons within or without the observatory may be made.

HYDRAULIC LABORATORY.

In this laboratory the student studies experimentally the laws governing the flow of liquids through orifices, pipes, weirs, etc., and also carries out experiments on the efficiency of various forms of water motors running under different conditions as regards head and supply.

The equipment includes:—Apparatus for the measurement of the discharge of water from orifices, nozzles, weirs, etc., under varying

conditions; arrangements for investigation of the loss of head by surface friction, and at curves and bends in pipes; Venturi meter for use at different discharges; a hydraulic ram working against different heads; various water motors, including Pelton wheels, Girard impulse turbine, Brotherhood three cylinder rotary engine, Thomson inward flow reaction turbine, American turbine; apparatus for measurement of pressure due to impact of jets on surfaces of different forms; gauge testing appliances; Hele Shaw's apparatus for study of the steam lines in a perfect fluid, illustrating the flow round obstructions in a channel, and numerous magnetic problems; numerous calibrated tanks, weighing appliances, and measuring apparatus in connection with the above.

MECHANICAL ENGINEERING LABORATORIES.

These laboratories are used in connection with the courses in Mechanical Engineering subjects. The smaller apparatus belonging to the laboratories includes the necessary equipment of weighing machines, ordinary and water dynamometers, steam calorimeters, thermometers, gauges, pyrometers, coal, gas and oil calorimeters, indicators, planimeters, flue gas analysis, etc.

1. Mechanical Laboratory.

The equipment of this laboratory includes:—A belt testing machine capable of taking a six inch belt at 15 feet centres (the machine has special hydraulic dynamometers and a friction brake and will absorb 15 H.P.); a Thurston railway pattern oil tester, fitted with water cooling and heating apparatus for varying the temperature of the brasses as desired; standard viscosimeters and other necessary apparatus for the physical testing of lubricants; a high speed horizontal engine having a cylinder 6 inches diameter 9 inches stroke, and operated by compressed air; a gas-fired preheater for the above engine; two standard 9½-inch Westinghouse airbrake pumps, fitted for testing and for supplying compressed air for experimental and other purposes; a non-rotative Blake steam pump, having steam and water cylinders 4½ and 2¾ inches diameter and 4½ inches stroke; apparatus for measuring the heat loss from pipe coverings and from radiators; a specially designed hydraulic support and fittings for carrying out experiments on the action of cutting tools in the lathe; apparatus for experiments on the efficiency of pulleys and hoisting appliances; on the efficiency of worm and other gearing, for governor testing; for testing fans and blowers; for studying problems connected with the balancing of reciprocating engines.

2. Steam Engine Laboratory.

This laboratory is furnished with an experimental steam engine of 120 I.H.P., specially designed for investigating the behaviour of steam under various conditions. The cylinders are 6½ inches, 9 inches, 13 inches and 18 inches in diameter, and the stroke of all the pistons is 15 inches. The cylinders can be so connected as to allow of working as a single, compound, triple, or quadruple expansion engine, either condensing or non-condensing, and with any desired rate of expansion. The jackets are so fitted as to permit of measuring independently the water condensed in the cover, barrel, or bottom jacket of each cylinder, and the engine can be worked with any desired initial pressure up to 200 lbs. per square inch. The measurements of heat are made by means of large tanks, which receive the cooling water and the condensed steam. There is an independent surface condenser and air pump. Two hydraulic absorption brakes and an

alternative friction brake serve to measure the mechanical power developed. This laboratory also contains the following machinery:— A Robb automatic cut-off engine, having a cylinder 10½ inches in diameter by 12 inches stroke, which is specially fitted up for the measurement of cylinder temperatures, and can be run at speeds up to 300 revolutions per minute; an automatic high speed engine by Macintosh & Seymour, having a cylinder 12 inches in diameter by 12½ inches stroke, in connection with which there is an automatic recording apparatus for registering the load on the brake; a Leonard horizontal engine, having a cylinder 8 inches diameter by 9 inches stroke, specially fitted for instructional work in valve setting and provided with an independent surface condenser; a two stage air compressor (built in the workshops of the Department) taking 40 H.P., and having cylinders 10 inches and 17 inches in diameter, by 15 inches stroke (the compressor delivers its air into reservoirs placed beneath the floor of the machine shop, and is provided with an intercooler whose capacity can be varied as desired); a 15 K.W. Curtis steam turbo-generator with independent surface condenser, air pump, and a bank of lamps for varying the load; two 12 H.P. high speed forced lubrication compound engines (built in the workshops of the Department), one of which is used to drive a Hall 1-ton CO_2 ice machine.

Steam is supplied to this laboratory by the boilers in the Workman Building. These consist of one 100 H.P. locomotive boiler, Belpaire type, fitted with Howden oil burning furnace, two Babcock and Wilcox water tube boilers, each 60 H.P., and one Yarrow water-tube boiler, fitted in a closed stokehold, for working under forced draft, rated at 100 H.P. These boilers are fitted with the necessary tanks, weighing machines and apparatus for carrying out evaporative tests. For the study of superheated steam there is a B. & W. separately fired superheater.

3. Gas Engine Laboratory. This laboratory contains a horizontal gas engine by the National Gas Engine Company, having a cylinder 12 inches diameter by 20 inches stroke and developing 40 B.H.P.; a suction type producer for the above, with the necessary scrubbers and gas cleaning apparatus; a down draft producer designed for working with lignite and bituminous coal; a standard 4-inch gas meter, gasometer, and exhauster; a 10 B.H.P. Otto type gas engine (built in the workshops of the Department), having a cylinder 8½ inches diameter by 12 inches stroke; a 14 B.H.P. 2-cylinder 2-cycle Grey gasoline engine and a 4 H.P. Blackstone oil engine.

METALLURGICAL AND ASSAYING LABORATORIES.

These consist of a large furnace room of 2,000 sq. feet, for metallurgical operations, a furnace room for assaying of 1,300 sq. feet, a balance room, small chemical laboratory, and parts of other rooms, which are utilized for pyrometric and photo-microscopic work. The furnace room is fitted with a water-jacket blast-furnace, 21 inches inside diameter, for smelting lead and copper ores; also a hand reverberatory furnace for roasting ores, having a hearth 14 ft. by 6 ft., and a Bruckner roasting furnace.

The furnace room adjoins the milling and ore-dressing room (see below), and ores which have been crushed and dressed can easily be conveyed into the furnace room for roasting, smelting or leaching treatments. In addition to this comparatively large scale plant, apparatus has been provided to enable the students to study in detail

the more important metallurgical operations, using quantities of ore or metallurgical products of usually not more than a few pounds in weight. With such appliances the work of the student can be of a more individual character than is generally possible with large-scale plants, and the reactions which occur can be more easily and exactly studied.

For the purpose of small-scale work there is a large crucible furnace which can be used with either natural or forced draught, an oil-fired crucible furnace, a large gas-furnace which can be used either as an oven-furnace or a muffle furnace, and a number of small muffle and crucible furnaces in the assaying laboratory. Several small dental furnaces have recently been added for the course of instruction in dental metallurgy.

Small blast-furnaces, lined with brick, have been constructed and used successfully for smelting small quantities of copper and cobalt ores. A Roots' blower has been provided for the blast furnaces, and connections for supplying forced draft have been made to the gas and reverberatory furnaces. Leaching operations on a small scale are conducted in stoppered bottles which can be agitated by machinery.

Provision has also been made for electric furnace work. The plant consists of a 50 H.P. motor 30 K.W. alternating current generator and transformers with measuring instruments. A Colby induction furnace and a Rennerfelt arc furnace have been installed for making steel electrically, and the smelting of ores and other electric furnace operations can be carried on satisfactorily with this plant. A low-voltage 1 H.P. direct-current generator is employed for electrolytic operations.

A powerful hydraulic press and a piece of apparatus for compressing gases by hydraulic power are available for experiments that have to be conducted under great pressure.

A small drop-testing machine and a Sankey metal bending tester have been installed for investigating the mechanical properties of metals.

The assaying laboratory is equipped with a number of muffle and crucible furnaces fired with coke, a large gas muffle furnace and a small muffle furnace and crucible furnace fired by gasoline.

Adjoining the assaying laboratory is the balance room and a small laboratory for chemical work. In another room are a number of electrical and other pyrometers, and a micro-photographic outfit for recording the microscopic structure of metals and alloys. Polishing machines worked by power have been installed to prepare the specimens for examination.

MINING AND ORE-DRESSING LABORATORIES.

The Department of Mining Engineering has one large laboratory for ore-dressing, and a number of rooms of moderate size equipped for use as special laboratories, offices, lecture room, dark room, machine shop, etc. The effective floor space is about 8,500 square feet, in addition to which the departmental store rooms, ore bins, etc., have an area of 1,500 feet.

The ore-dressing laboratory proper is built in two storeys about a central well and has about 5,000 feet total floor space. The equipment comprises two classes of apparatus. First, a large number of pieces especially designed for individual work on a small scale. Many of these are for elementary investigations and demonstrations of a theoretical nature, others are working reproductions on a reduced scale of typical

ore dressing and milling machines. Second, a complete plant of standard apparatus for ore crushing, sampling, milling, concentrating and for coal washing. This apparatus has been chosen from the best designs in common use and whenever possible each important class of ore-dressing machinery is represented by two or more different types, in order that comparisons may be made. Each machine is so arranged that it may be used and tested independently, but, when expedient, a number of machines can be connected by conveyors, and thus complete plants of various kinds can be improvised, each of sufficient capacity to test large lots of material under approximately working conditions.

The chief pieces of apparatus in the main laboratory are rock-breakers of four kinds, Blake, Dodge, Gates, and Sturtevant, for coarse crushing; gravity stamp mills of 600 and 950 lbs., respectively, a Nissen stamp of 1,200 lbs., a small steam stamp and a 3-foot Huntington centrifugal roller mill, for crushing and amalgamating; high speed steel-tyred rolls for fine crushing; Sturtevant and Gates' grinders for preparing samples, and ball mills, pebble mills and amalgamation pans for extremely fine grinding. Following these there are Bell, Jones and Brunton samplers; a Callow belt screen, a series of trommels and power shaking screens for sizing the crushed ores, two especially designed jigs of two and four compartments with adjustable eccentric, cam and slide mechanism, a pneumatic jig, a Richards' pulsator jig, a Taylor vibrating jig and several small hand and power jigs for coarse and medium concentration; bumping and stationary tables of several types, including a Frue vanner, a Wifley table, Bartlett table, and a series of Bell's feeders, etc., for separating valuable minerals contained in the fine sands and slimes; plates, pans and barrels for amalgamating gold and silver ores; agitators, vats, vacuum filters, and other apparatus for flotation, cyaniding, chlorinating and other extraction processes; spitzkasten, spitzlutte, magnetic separators, an electrostatic separator, coal washers, cones, and various other special pieces of ore-dressing apparatus.

An hydraulic lift and a number of belt and bucket and hydraulic jet elevators, feeders, samplers, steam-jacketed drying tables, etc., are provided for use in heavy continuous work. The power chiefly used is electricity, generated in the University power and light station and utilized through a number of independent electric motors aggregating 70 H.P. conveniently placed near the machines to be operated, but steam is used for some pieces of apparatus and others may be driven by a Pelton wheel. A motor-driven air-compressor of 7½ H.P. provides an ample supply of compressed air. The department is equipped with suitable apparatus for electrical measurements, and is thus able to make continuous and accurate determination of the amount of power used by each machine.

In addition to the main laboratory there are excellent facilities for advanced and research work—including a small but thoroughly equipped chemical and assay laboratory and photographic room. The department possesses a number of cameras, microscopes, recording guages and indicators, a good equipment of weighing and measuring devices, and a number of pieces of special apparatus for advanced theoretical investigation.

PETROGRAPHICAL LABORATORIES.

The petrographical laboratory, containing the chief rock collections of the University, is situated in the Chemistry and Mining building. It is provided with a number of petrographical microscopes

by Seibert, Crouch, and Fuess, as well as with models, sets of thin sections, electromagnets, heavy solutions, etc., for petrographical work.

A collection of typical rocks has been especially prepared for the use of students, and a complete equipment for cutting, grinding, and polishing rocks has been installed, which runs by electric power and gives excellent facilities for the preparation of thin sections for microscopic use.

For advanced work and petrographical investigation Dr. Adams' extensive private collection of rocks and thin sections is available for purposes of study and comparison.

THE PHYSICAL LABORATORIES.

The equipment of the Macdonald physical laboratories comprises: (1) apparatus for illustrating lectures; (2) simple forms of the principal instruments for use by students in practical work; (3) various types of all important instruments for exact measurements, to be used in connection with special work and research.

The magnetic laboratory contains magnetic instruments and variometers of different patterns, and also a duplicate of the B. A. Electric-dynamometer. The laboratory on the opposite side of the basement contains a Lorenz apparatus for the absolute measurement of resistance, constructed under the supervision of Prof. Viriamu Jones.

There is a constant temperature room, surrounded by double walls, which is fitted for comparator work.

The first floor contains the main electrical laboratory, which is a room 60 feet by 40, and is fitted with a number of brick piers, which come up through the floor, and rest on independent foundations, in addition to the usual slate shelves around the walls. This room contains a large number of electrometers, galvanometers, potentiometers, and other testing instruments of various patterns, and adapted for different uses. Three small research laboratories adjoin the electrical laboratory. A well-equipped workshop serves for the construction of research apparatus and repair work.

On the second floor of the building there is the heat laboratory, devoted to advanced work in thermometry, pyrometry and calorimetry and also to such electrical work as involves the use of thermostats and the measurement of the effects of temperature. This adjoins a private laboratory fitted for research work.

The third floor contains two small lecture rooms, a library and reading room for the staff, an elementary laboratory and professors' rooms.

The fourth floor contains the large elementary laboratory, a room 60 feet square, devoted to elementary practical work in heat, sound, light, electricity and magnetism. There is a demonstrators' room adjoining, and an optical annex devoted to experiments with lenses, galvanometers, etc., which require a darkened room. On the other side of the building there is a spectroscopic room, containing a six-inch Rowland grating, with mountings by Brashear, and other large spectrometers and polarimeters; also a series of smaller optical rooms, including a photometric room, especially fitted for arc photometry and a dark room for photographic work.

LABORATORY OF PHYSIOLOGY.

The physiological laboratory occupies part of the old Medical Building. It consists of a large general laboratory, with accommodation for 80 students working at one time.

THE PSYCHOLOGICAL LABORATORY.

The psychological laboratory occupies two rooms in the Arts Building. It contains apparatus for the study and investigation of sensation, perception, ideas, memory, association, attention, volition, feelings, emotions and reaction. This equipment serves three purposes: First, it is adapted to research work in the various fields of experimental psychology, including physiological psychology, educational psychology, and applied psychology. Second, it is used to acquaint beginners with the methods of experimental psychology, both qualitative and quantitative. Third, it furnishes material for experimental demonstration in the elementary and advanced lecture courses.

STRENGTH OF MATERIALS LABORATORIES.

These laboratories are equipped with apparatus for the determination of the physical properties of the materials of construction and for illustrating the fundamental laws of the strength of materials. The equipment includes:—

(a) Riehle testing machine of 60,000 lbs. capacity, a Wicksteed 100-ton and an Emery 75-ton machine for testing the tensile, compressive and transverse strength of the several materials of construction. To the Wicksteed has been added a specially designed arrangement, by which the transverse strength of girders and beams up to 26 ft. in length can be determined. Special holders have also been designed and made in the laboratory for investigating the tensile and shearing strength of timber, and for the testing of wire ropes, belts, etc.

(*b*) A Rondet-Schor Machine, with a capacity of 500 kilograms for testing textile fabrics.

(*c*) A Torsion Machine with a special designed angle measurer, by which the amount of the torsion can be measured with extreme accuracy.

(*d*) An accumulator, furnishing a pressure of 3,600 lbs. per square inch, which is transmitted to the several testing machines, and ensures a perfectly steady application of stress, an impossibility when any form of pump is substituted for an accumulator. An automatic electric motor has been designed in the laboratory and constructed for the purpose of actuating the accumulator.

(*e*) A Blake and Worthington steam pump and an electric pump, designed to work against a pressure of 3,600 lbs. per square inch. The accumulator may be actuated by any of the pumps, and, if at any time it is necessary to do so, any of the pumps may be employed to actuate the testing machine direct. When in operation the work of the pump and the accumulator is automatic.

(*f*) Extensometers of the Bovey, Ewing, Unwin, Martens, Marshall and other types.

(*g*) Portable cathetometers, and also a large cathetometer specially designed and constructed for the determination of the extensions, compressions and deflections of the specimens under stress in the testing machines.

(*h*) Various electric motors for working the several machines.

(i) A drying oven for beams up to 26 feet in length. The hot air in this oven is kept in circulation by means of a fan driven by an electric motor.

(*j*) Numerous gauges, amongst which may be specially noticed an Emery pressure gauge, graduated in single lbs. up to 2,500 lbs. per square inch. All of the testing machines are on the same pressure circuit, and are connected with the Emery gauge and also other standard gauges, including recording gauges. This arrangement provides a practically perfect means of checking the accuracy of the testing.

(*k*) Special apparatus and recording gauge for the testing of hose, etc.

(*l*) Dynamometers for measuring the strength of textile fabrics, the holding power of nails, etc.

(*m*) Apparatus for determining the elasticity of long wires.

(*n*) Apparatus for determining the hardness of materials of construction, including Shore scleroscope.

(*o*) Zeiss and other microscopes.

(*p*) Delicate chemical and other balances. A very important part of the equipment is the Oertling balance, capable of indicating with extreme accuracy weights of from .00001 lb. up to 125 lbs.

(*q*) Apparatus for the microscopic study of metals and for microscopic photography.

(*r*) Micrometers of all kinds, including a 10 inch Howard gauge.

(*s*) A transverse bending machine which is adapted for loads up to 3,000 lbs. and for beams of 10 ft. span and a testing machine for applying bending and torsion simultaneously.

ZOOLOGICAL LABORATORIES.

The Zoological Department occupies the whole of the uppermost floor of the east wing of the Arts Building and the larger portion of the floor immediately below.

It consists of:—

(*a*) A large laboratory affording accommodation for a class of 80 students.

(*b*) A smaller laboratory capable of seating about 18 students.

(*c*) Three small laboratories fitted up for purposes of research.

2. MUSEUMS.

MUSEUM OF HYGIENE.

DIRECTOR:—PROF. T. A. STARKEY.

The material in the museum has been rearranged with a view to exhibiting not only specimens of the best and most approved types of appliances in each particular branch of public health, but also examples of types which are to be avoided on hygienic principles.

In order to facilitate study and reference, the specimens have been classified upon a decimal system under the following sections:—

1. *Disinfection.*—Including disinfecting apparatus of all kinds, disinfectants and antiseptics.

2. *Lighting and Heating.*—Showing contrivances used for these purposes.

3. *Water.*—Showing conditions connected with pollution of water supplies, whether derived from the surface or underground sources; methods of purification on large and small scales; water pipes, etc., and the influence which these fittings may exert upon the water contained therein.

4. *Soils and Buildings.*—Building sites, various kinds of soils; relation between soil and dampness; permeability of soils to gases and water; composition of soils; effects of ground moisture on dwellings; measures to be taken against dampness and foul air; and building materials of all kinds.

5. *Air.*—Including ventilation schemes and appliances; climate and meteorology, with apparatus illustrative of each class.

6. *Foodstuffs.* — Adulterations and sophistications practised; samples of unsound foodstuffs.

7. *Bacteriological and Pathological.* — Specimens of diseased meats; specimens and slides of all the common micro-organisms, pathogenic and non-pathogenic.

8. *Clothing.—Specimens* of all the materials utilized for the manufacture of clothing, showing the raw state and the various processes through which they pass until the finished product is reached; the hygienic value of these various articles.

Injuries and deformities which may directly result from the use of badly designed articles of clothing; history and evolution of clothing.

9. *Drainage and Refuse Disposal.*—This section includes every type of appliances used as sanitary fixtures in buildings; drainage schemes; ultimate disposal of refuse both liquid and solid,—refuse destructors, and sewage disposal plants. The section also includes types of faulty methods and appliances which on principle ought to be avoided.

In addition to the regular museum exhibit, there is a collection of over 1,000 lantern slides illustrative of phases of hygiene. The slides have been so arranged as to be available for demonstrations as hand specimens.

A catalogue with text and full description of all the exhibits contained in the museum is issued by the University authorities, and may be purchased at the general office.

PATHOLOGICAL MUSEUM.

DIRECTOR:—PROFESSOR J. G. ADAMI. (On military service, overseas.)
ACTING-DIRECTOR:—PROFESSOR HORST OERTEL, M.D.
CURATOR:—MAUDE E. ABBOTT, B.A., M.D.
ASSISTANT CURATOR:—JOSEPH KAUFMANN, M.D.
OSTEOLOGIST AND PREPARATOR:—E. L. JUDAH.

The Pathological Museum of the University consists to date of 3,122 mounted and catalogued specimens on shelves, and a considerable storage from which material is constantly being added. A descriptive catalogue is in process of preparation and the part on the Haemopoietic organs has been published by the Oxford Press. Other parts are available and are being made ready for print through the help of the Osler Catalogue and Cooper Funds. In addition the pathological collection of the Royal Victoria Hospital consists to date of 230 specimens mounted in colors, on shelves and catalogued, and much storage material for teaching purposes including an extensive set of microscopic slides and charts for pathological and clinical teaching.

THE PETER REDPATH MUSEUM.

HONORARY CURATOR:—PROF. ARTHUR WILLEY.
CURATOR:—E. ARDLEY.

The large and valuable collections in botany, zoology, mineralogy and geology are arranged in such a manner as to facilitate the work in these departments.

The general arrangement is as follows:—

1. The botanical room on the ground floor contains the herbarium, consisting of 50,000 specimens of Canadian and exotic plants and collections illustrating structural and economic botany.

2. In the corridor on the ground floor is exhibited the Todd Ethnographical Collection from West Africa.

3. The Lyman entomological room is also situated on the ground floor. Mr. A. F. Winn is the entomological curator under the Lyman Bequest.

4. On the first floor is a room over the entrance hall, in which are cases containing archæological and ethnological objects, including collections from the Queen Charlotte Islands, from Egypt, and from West Africa.

5. This room opens into the great museum hall, on each side of which are alcoves with upright and table cases containing the collection in palæontology arranged primarily to illustrate the successive geological systems, and subordinately to this, in the order of zoological and botanical classification, so as to enable the student to see the general order of life in successive periods, and to trace any particular group through its geological history.

6. At the extreme end of the hall are placed the collections of minerals and rocks, arranged in such a manner as to facilitate their systematic study. In the centre of the hall are economic collections and large casts and models.

7. In the upper story or gallery of the great hall are placed the zoological collections; the invertebrate animals in table cases in regular series, beginning with the lower forms; the vertebrate animals in upright cases, in similar order. THE PHILIP CARPENTER COLLECTION of shells is especially noteworthy for its arrangement and completeness.

Papers or memoirs relating to certain type specimens in the collections can be obtained from the Assistant Curator. Classes of pupils from schools can be admitted on certain days under regulations which may be learned from the professors or from the Registrar of the University.

3. WORKSHOPS.

The workshops, erected on the Thomas Workman Endowment, have a floor area of more than 20,000 square feet.

Equipment.—The carpenter shop and the pattern shop contain thirty-eight carpenters' and pattern-makers' benches complete with the necessary sets of hand tools, twenty-two wood-turning lathes with their turning tools, a large pattern-maker's lathe for faceplate work, one circular-saw bench, a jig-saw, a band-saw, two wood-trimmers, a surface-planer, a thickness planer, a mortising machine, a saw-sharpener, and one universal wood-working machine.

The smith shop is provided with twenty Sturtevant forges, which are power-driven and are connected with an exhaust fan. There is

a power hammer, and the necessary equipment of anvils, swage blocks, sets, flatteners and other tools. Provision is made for instruction in soldering and brazing.

The foundry has benches, tools and apparatus for bench and floor moulding and core-making, and is able to accommodate twenty students. A gas-fired brass melting furnace, a cupola for melting iron, and the necessary core-ovens and core-benches give facilities for undertaking iron foundry work in green and dry sand, and for brass moulding. The shop is served by a hand travelling crane of one ton capacity.

The machine shop has twelve 18-inch engine lathes, one 18-inch turret lathe fitted for stud and screw making, one 27-inch engine lathe, one 72-inch surfacing lathe, one brass-finishing lathe, one 36-inch vertical drilling machine with compound table, one universal milling machine with vertical milling attachment and dividing head-stock, one planer capable of taking work up to 24 x 24 in. x 5 ft., one 9-inch slotting machine, one 16-inch shaper, one universal grinding machine, centering machine, a cutter grinder, a tool grinder, and a inch vertical drilling machine with compound table, one universal buffing and emery grinding machine. There are vise benches for eighteen students, with the necessary hand-tools, and a marking-off table. The tool-room contains a full equipment of drills, reamers, milling cutters, and accessories, gauges, calipers, and other measuring instruments.

All the machinery in the workshops is driven electrically by motors taking power from the generating station in the Macdonald Building.

REGISTER OF STUDENTS.

SESSION 1917-1918.

FACULTY OF ARTS.

FIRST YEAR.

(McGill College.)

NAME	HOME ADDRESS	SCHOOL LAST ATTENDED
*Adey, Charles Ashton	Hants Harbour, Nfld.	Methodist College, St. John's, Nfld
Armstrong, Lawrence Henry	Montreal, Que	Montreal High School.
Badian, Alan Maurice (Comm. Course)	Montreal, Que	Montreal High School.
Barrett, Arthur Wm. Reddy	Westmount, Que	Westmount High School.
Baum, Max (B.Sc. Course)	Montreal, Que	Private Tuition.
Berger, Samuel	Ottawa, Ont	Ottawa Coll. Inst.
Bockar, Alexander (Comm. Course)	Westmount, Que	Montreal High School.
Borden, Henry	Grand Pré, N.S	King's College School.
Bourgoin, Henri Edmond	Montreal	Pointe-aux-Trembles Inst.
Boyce, J. Clifford	Calgary, Alta	Crescent Heights Coll.
Breitman, Reuben	Montreal, Que	Montreal High School.
Brown, David Alex (Comm. Course)	Outremont, Que	Strathcona Academy.
Bullock, Theo. Lafleur	Roxton Pond, Que	Granby High School.
Cohen, Lawrence Zebulun	Westmount, Que	Westmount High School.
Cousens, Henry	Bolton Centre, Que	United Theo. College.
Curtis, Gilbert Spurgeon	Blackhead, Nfld	Wesleyan Theo. College.
Dectar, Alfred Abram	Montreal, Que	Montreal High School.
*Dilts, John Aaron	Dunnville, Ont	Dunnville High School.
Dobson, Ivan Sutherland	Outremont, Que	Montreal High School.
*Donald, Frederick Cecil	Montreal, Que	Montreal High School.
Doucet, John James	Ottawa, Ont	University of Ottawa.
Duval, Robert Herbert (B.Sc. Course)	St. Johns, Que	St. Johns High School.
Dworkin, Simon	Montreal, Que	Montreal High School.
Eager, Norman H. A (B.Sc. Course)	Westmount, Que	Westmount High School.
Echenberg, Henry Lehrer	Montreal, Que	Hoscote Coaching Estab.
*Ein, Moses	Glace Bay, N.S	Glace Bay High School.
Ein, William	Glace Bay, N.S	Glace Bay High School.
*Elder, Herbert Munro	Westmount, Que	Wykeham House School.
Feldstein, Abraham Jos	Montreal, Que	Commercial and Technical High School.
*Fieldman, Leo	N. D. de Grace, Que.	Private Tuition.
Fineberg, Maxwell	Westmount, Que	Montreal High School.
Franklin, Gerald	Montreal, Que	Montreal High School.
Franklin, Michael Harry	Westmount, Que	Westmount High School.
Freedman, Joseph (B.Sc. Course)	Lachine, Que	Lachine High School.
*Gillingham, Thos. Muir	St. John's Nfld	Bishop Field College.
Glickman, Bernard (Comm. Course)	Westmount, Que	Westmount High School.
Hébert, Chas. Pierre	Montreal, Que	Mount St. Louis College.

*Partial.

Name	Home Address	School Last Attended
Hodgson, Wm. Maurice	Montreal, Que	Lower Canada College.
Hooper, Willis Mathieu	Brownsburg, Que	Lachute Academy.
*James, Clark B, B.A	N. D. de Grace, Que.	
Jephcott, Wm. Gerald H	Westmount, Que	Westmount High School.
Johnson, Edwin Lewis	Brownsburg, Que	Lachute Academy.
Joseph, Philip	Montreal, Que	Montreal High School.
Kay, Edwin (B.Sc. Course)	Montreal, Que	
Lax, Abel	Hawkesbury, Ont	Hawkesbury High School.
Layton, Gilbert Guy	N. D. de Grace, Que.	Montreal High School.
Le Bel, Onesime E	Outremont, Que	Presbyterian School, Pointe-aux-Trembles.
Levitt, Moses (Comm. Course)	Montreal, Que	Montreal High School.
*Lloyd, James Edward	Montreal, Que	Congregational College, Montreal.
*Loisel, Oscar	Montreal, Que	St. Kevin's School.
*McCarthy, Gerald Jas (B.Sc. Course)	Montreal, Que	Catholic High School.
MacDonald, Findlay M (Comm. Course)	Spring Hill, Que	Cookshire Academy.
McEwen, Keith M	Maxville, Ont	Maxville Continuation School.
McIntosh, C. Alexander	Ottawa, Ont	St. Andrews' College.
*McLagan, Thomas R (Comm. Course)	Westmount, Que	Lower Canada College.
*McLauchlan, Chas. B	Rawdon, Que	Wesleyan Theological College.
Mader, Victor Owen	Halifax, N.S	Halifax County Academy.
*Magonet, Solomon	Glace Bay, N.S	Glace Bay High School.
*Marsh, Alfred Finnis	Birmingham, England,	Wesleyan Theological College.
*Millen, Albert Edward	Damascus, Ont	Wesleyan Theological College.
Mirsky, Samuel (B. Sc. Course)	Ottawa, Ont	Ottawa Collegiate Inst.
*Moas, Manuel	Havana, Cuba	Mount St. Louis Institute.
*Morrison, Donald R	Marsboro, Que	Presbyterian College.
*Mullen, Robert D	Greenfield Park, Que.	Wesleyan Theological College.
*Neederhoffer, Fred	Montreal, Que	Commercial and Technical High School.
*Newnham, Bertram Edwin	Damascus, Ont	Wesleyan Theological College.
Notkin, David Mortimer	Montreal, Que	Montreal High School.
Overing, Reginald C. L	Montreal, Que	Montreal High School.
Phillimore, Gerald H	Montreal, Que	Montreal High School.
Potter, Eben Francis (Comm. Course)	Valleyfield, Que	Gault Institute.
Pratt, William Frederick	Westmout, Que	Wykeham House School.
Rabinovitch, Jacob (B.Sc. Course)	Montreal, Que	Private Tuition.
*Reford, Lewis Eric	Montreal, Que	Rugby, England.
Reid, Howard Edward	Granville Ferry, N.S.	Annapolis County Academy.
Robertson, James Ritchie	Halifax, N.S	University School, Victoria, B.C.
Ross, Henry Taylor, Jr	Westmount, Que	Ottawa Collegiate Inst.
Rothschild, Samuel	Westmount, Que	Sudbury High School.
Rountree, John Leonard	Westmount, Que	Westmount High School.
Rowat, Harland Cameron	Athelstan, Que	Huntingdon Academy.

*Partial.

Name	Home Address	School Last Attended
Savage, Joseph Clifford	St. Lambert, Que	Catholic High School.
Schleifstein, Jos. Isaac	Montreal, Que	Boys' High School, Quebec
*Seeley, Thomas George	Bareneed, Nfld	Methodist College, St. John's, Nfld.
*Servage, Harvey Maxwell	Dunbar, Ont	Morrisburg Collegiate.
Shapira, William	Montreal, Que	Montreal High School.
Shapiro, Joseph Jack	Montreal, Que	Montreal High School.
Shaver, Harold Clinton	Aultsville, Ont	Presbyterian College.
Shulman, Samuel Alexander	Montreal, Que	Montreal High School.
Sifton, Cyril Hardy (B.Sc. Course)	Lachine, Que	Montreal Y.M.C A.
Silverstein, Moses	Montreal, Que	Montreal High School.
Sperber, Lionel Albert	Montreal, Que	Montreal High School.
Taylor, Samuel Robertson (B.Sc. Course)	Westmount, Que	Westmount High School.
Teitelbaum, Michael	Montreal, Que	Hoscote Coaching Establishment.
Wagner, Harry	Montreal, Que	Montreal High School.

(*Royal Victoria College.*)

*Aylen, Dorothea Elisabeth	Ottawa, Ont	The Carleton School, Ottawa.
*Barnard, Beatrice Evelyn	Westmount, Que	Miss Palmer's School.
Barnes, Doris Scoullar	St. John, N.B	St. John High School.
Barnes, Edith Louise	St. John, N.B	St. John High School.
Bishop, Hazel Martha	Bishop's Crossing, Que	Cookshire Academy.
*Bolger, Ula Mercer	Montreal, Que	Miss Palmer's School.
*Brierley, Betty	Westmount, Que	King's Hall, Compton.
Brodie, Doris Lily	Quebec City, Que	King's Hall, Compton.
Cameron, Katharine Locke	N. D. de Grace, Que	Westmount High School
Campbell, Sarah Doris	Lachute, Que	Lachute Academy.
Cockfield, Helen Reid	Lac Charlebois, Que	Montreal High School.
Craig, Ruth Dyke	Montreal, Que	Montreal High School.
Davidson, Winifred Hazel	N. D. de Grace, Que	Westmount High School.
Deery, Margaret Jean H	Montreal, Que	Montreal High School.
*Dyke, Olive Marjorie	Westmount, Que	Westmount High School.
Fares, Merle Marian	Winnipeg, Man	Kelvin Tech., Winnipeg.
Fitzsimons, Anna Florence	Outremont, Que	Holy Names Convent.
Ford, Constance	Portneuf Stn., Que	Girls High School, Quebec.
Foster, Mary Winnifred	Westmount, Que	Westmount High School.
Franklin, Beatrice	Westmount, Que	Westmount High School.
Garrow, Muriel Wilma	Montreal, Que	Trafalgar Institute.
Gillespie, Kate Menzies	London, Ont	London Collegiate Inst.
Godwin, Kathleen Frances	Ste. Anne de Bellevue, Que	Macdonald College High School.
Gray, Agnes Edith May	Montreal, Que	Montreal High School.
*Gurman, Maud	Montreal, Que	Private Tuition.
Harvey, Constance Muriel	Westmount, Que	Miss Edgar's School.
*Hemming, Clarissa	Montreal, Que	Wycombe Abbey School, Buckingham, England.
Higginson, Helen Magee	Buckingham, Que	Trafalgar Institute.
Hill, Isabel Marion Eleanor	Richmond, Que	St. Francis College High School, Richmond, Que.
Holland, Ethelwyn Jamieson	Montreal, Que	Montreal High School.
Husk, Ruth Joy Esther	Ulverton, Que	St. Francis College High School, Richmond, Que.
Irwin, Chloris Constance (B.Sc. Course)	Westmount, Que	Westmount High School.

*Partial.

Name	Home Address	School Last Attended
*Kellert, Frances Muriel	Westmount, Que	Pennsylvania Inst. for the Instruction of the Blind.
Lecker, Calla	Montreal, Que	Strathcona Academy.
Lefkovitz, Celia	Montreal, Que	Commercial & Technical High School.
Lewis, Esther Eileen	Lachine, Que	Cowansville Academy.
*Lipsey, Bessie	Westmount, Que	Westmount High School.
Louis, Goldie Olga	Montreal, Que	Montreal High School.
*McCaig, Jean Elizabeth	Montreal, Que	Montreal High School.
McClure, Helen Margaret	Longueuil, Que	Longueuil Academy.
Macdiarmid, Margaret L	Montreal, Que	Montreal High School.
MacIntosh, Hope	Montreal, Que	Montreal High School.
McPherson, Anna Isobel	Montreal West, Que	Westmount High School.
Mansfield, Doris	Westmount, Que	Westmount High School.
Medbury, Dorothy Durfee	Montreal, Que	Chelte nham House, U.S.A.
Mills, Gladys Alexandra	Ormstown, Que	Ormstown Academy.
*Panish, Bessie	Bridgeport, Conn	Public School No. 165, Brooklyn, N.Y.
*Rapp, Lily Reba	Montreal, Que	Commercial & Technical High School.
Reeb, Marcelle Jeanne	Montreal, Que	Montreal High School.
Reid, Regina	N. D. de Grace, Que	Commercial & Technical High School.
Robson, Jean Hay	Winnipeg, Man	Kelvin High School, Winnipeg, Man.
*Scane, Mary Amelia Marjorie	Ste. Thérèse de Blainville, Que	Ste. Thérèse Convent.
Sharples, Alice Murray	Quebec City, Que	Edgehill, Windsor, N.S.
Silverman, Malca	Montreal, Que	Montreal High School.
Simon, Beatrice Vina	Montreal, Que	Montreal High School.
Snyder, Evelyn Alice	St. Lambert, Que	St. Lambert High School.
Spier, Janie Dickson	Westmount, Que	Trafalgar Institute.
Thornton, Jessie Muriel	N. D. de Grace, Que	Westmount High School.
Van Buren, Flora Emma	Montreal, Que	Hyde Park High School, Chicago.
*Wayland, Esther	Montreal, Que	Sacred Heart Convent.
Willson, Reta Ethel	Montreal, Que	Strathcona Academy.

SECOND YEAR

(*McGill College.*)

Name	Home Address
Adair, Cyril Harris	Westmount, Que
*Barnes, Walter Bramwell	Moreton's Harbor, Nfld.
*Beach, Hector M	Winchester, Ont.
*Bennett, Edwin Francis	Channel, Nfld.
*Birks, William Noble	Montreal, Que.
Bourke, William Manly	Montreal. Que.
Center, Ervin Alfred	Lachute, Que.
Coveler, Harry Alexander	Montreal, Que.
*Davis, Isaac	Greenspond, Nfld.
Delahanty, Michael Patrick (Comm. Course)	Montreal, Que.
DiFlorio, Pasquale	S. Pietro in Fine, Italy.
Duncan, William Leslie	St. Lambert, Que.
Ereaux, Lemuel Price (B.Sc. Course)	Westmount, Que.
Evans, Otty Blair	St. John, N.B.
Ford, Ross Howitt	St. Lambert, Que.
Frank, Moses	Montreal, Que.
Freedman, Lewis Kellert	Montreal, Que.

*Partial.

Name	Home Address
Freedman, Newman Barnett (B.Sc. Course)	Montreal, Que.
Galley, John Vessot (B.Sc. Course)	Pakenham, Ont.
Greaves, Edwin Mortimer	Westmount, Que.
Hershon, Henry (B.Sc. Course)	Montreal, Que.
*Honey, Howard Percy, B.A.	Abbotsford, Que.
Kilgour, Charles Willard (Comm. Course)	Beauharnois, Que.
Knowlton, Henry Corey	Guilford, Me.
Laing, Alan	Outremont, Que.
McClure, James Carswell	Lachute, Que.
*McGlaughlin, Wm. Robert (B.Sc. Course)	Westmount, Que.
McKinnon, James Donald	Sudbury, Ont.
*Mallalieu, Benjamin	Halifax, England.
*Mann, Melville Staveley	Westmount, Que.
Martin, Erle Crutchfield	Dewittville, Que.
Masson, Paul Alfred (Comm. Course)	Longueuil, Que.
Murray, William Alex.	Brownsburg, Que.
O'Brien, John Lewis	Westmount, Que.
Petersen, James Norman (B.Sc. Course)	Montreal, Que.
Peterson, Norman Edwin	Montreal, Que.
Phillips, Otto B. (B.Sc. Course)	Sydney, N.S.
Popliger, Israel Alex.	Montreal, Que.
Rabinovitch, Boaz (B.Sc. Course)	Montreal, Que.
*Raphael, Max I.	Montreal, Que.
Rubin, Saul (B.Sc. Course)	Montreal, Que.
Sells, Howard Peebles (Comm. Course)	Notre Dame de Grace, Que.
Shaw, Thomas Patton Gladstone (B.Sc. Course)	Montreal, Que.
Smith, Clifford Bliss	Montreal, Que.
Somerville, Wallace Bertram	Bristol, N.B.
*Taylor, Arthur James	Caughnawaga, Que.
Vineberg, Norman M.	Montreal, Que.
*Wilson, Melville Haigh	Montreal, Que.
Wiseman, Solomon	Montreal, Que.

(Royal Victoria College.)

*Anderson, Gladys Pomeroy	Westmount, Que.
Borden, Eunice Lothrop	Grand Pré, N.S.
*Borland, Florence Daisy	Westmount, Que.
*Brodie, Janet Kerr	Montreal, Que.
Caplan, Beatrice	Toronto, Ont.
Charlton, Dorothy Kathleen (B.Sc. Course)	Outremont, Que.
Contant, Rebecca Amy	Montreal, Que.
Dart, Jennie Doris	St. Lambert, Que.
Davidson, Gertrude Hazel	Westmount, Que.
*Dewey, Dorothy Marion	Westmount, Que.
*Ditchfield, Mary Elizabeth	Westmount, Que.
England, Violet	Vancouver, B.C.
*Enzer, Jeanette	Montreal, Que.
Ewing, Gwendolyn Gordon	St. John, N.B.
*Fineberg, Agnes Florence	Westmount, Que.
Flanagan, Eileen Constance	Montreal, Que.
Ford, Katherine McLaren	Portneuf Station, Que.
Forde, Eleanor Napier	Montreal, Que.
Goddard, Mabel Alice	Outremont, Que.
Goodman, Clara Annie	Campbellton, N.B.
Henry, Edith F.	Westmount, Que.
Hill, Eleanor Marguerite	Outremont, Que.
Imrie, Isabelle Mae	Westmount, Que.
*Macdonald, Isabel Marion	Westmount, Que.
MacDougall, Marguerite	Montreal, Que.
*McKenzie, Edith Lillian	Charlottetown, P.E.I.

*Partial.

NAME	HOME ADDRESS
MacKinnon, Flora Janet	Kimberley, Que.
Maclaren, Florence Reid (B.Sc. Course)	Buckingham, Que.
McMillan, Hazel	Westmount, Que.
McMillan, Myrtle	Westmount, Que.
Mathewson, Dorothy Ruth	Montreal, Que.
Mawdsley, Mary Dorothy	Clemens, Alta.
Meyer, Bertha	Westmount, Que.
Milligan, Kathleen Melville	Westmount, Que.
Moody, Mary Grace Holland	Winnipeg, Man.
Moule, Dorothy Edith	Ste. Anne de Bellevue, Que,
Nichol, Helen Richards H	Westmount, Que.
Nichol, Jean	Westmount, Que.
Novick, Fannie	Montreal, Que.
Olding, Maude Emma Mary	New Glasgow, N.S.
*Potashner, Annie Helen	Montreal, Que.
*Price, Enid M	Westmount, Que.
Reid, Jean	Granville, Ferry, N.S.
Rhodes, Gertrude	Bergerville, Que.
Robertson, Mary Ishbel	Ottawa, Ont.
Rorke, Emily Christine	Montreal, Que.
Roston, Lucille R	Westmount, Que.
Safford, Alice Kathleen	Sutton, Que.
Sangster, Eva Muriel	Bainsville, Ont.
Savage, Queenie	Montreal, Que.
Scott, Irene Elizabeth	Lachute, Que.
*Segal, Vella	Montreal, Que.
Steeves, Sara Eunice	Hillsboro, N.B.
Tarshis, Anny	Montreal, Que.
Wall, Eileen Mary	Verdun, Que.
*Wigdor, Eda	Montreal, Que.
Wilson, Alice Elizabeth	Sherbrooke, Que.

THIRD YEAR

(McGill College)

Aylen, Henry Aldous	Ottawa, Ont.
Booker, Hanford Karl	Devon, N.B.
Brandes, Emmanuel	Montreal, Que.
*Bussière, Henry Charles	Montreal, Que.
*Clapham, Harry	Bradford, England.
†Davis, Archie	Lachine, Que.
Fitzgerald, Ralph Richard (B.Sc. Course)	Calgary, Alta.
*Gardner, David	Partick, Scotland.
†Goldwater, Ephraim	Lachine, Que.
†Golt, Moses Israel	Montreal, Que.
Grier, James	Ramelton, Ireland.
Holtham, Bartley Nelson	Waterville, Que.
*Jackson, Oliver	Clark's Beach, Nfld.
Joseph, Bernard	Montreal, Que.
Klineberg, Otto	Montreal, Que.
Levy, John	Montreal, Que.
†Lipsey, Hyman	Westmount, Que.
MacGibbon, Archibald Douglas	Lachute, Que.
McRae, Roderick Alex	Vankleek Hill, Ont.
Mergler, Joseph Konrad	Montreal, Que.
Mills, Edward S. (B.Sc. Course)	Ormstown, Que.
Noad, Algy Smillie	Montreal, Que.
Ritchie, John Robert	Aylmer, Que.
†Rothschild, David (B.Sc. Course)	Westmount, Que.
*Selenger, Samuel	Montreal, Que.
Smart, R. A. Grant	Lachine, Que.

*Partial. †Double Course.

Name	Home Address
Smith, Arthur Ives	Montreal, Que.
*Suter, Henry Charles	London, England.
*Terry, John William	Moose Jaw, Sask.
†Usher, Barney David	Montreal, Que.
Vaughan, James Minton (B.Sc. Course)	Mount Vernon, N.Y.
Younger, George Robert	Westmount, Que.

(Royal Victoria College.)

Abbott, Elizabeth Edith	Senneville, Que.
Baker, Edith Bertha	Westmount, Que.
Banfill, Gladys Maud	East Angus, Que.
Basnar, Florence Ella	Cowansville, Que.
Boyd, Bernice Eleanor	Westmount, Que.
Cameron, Sarah Symonds	Sydney, N.S.
Craig, Gwyneth Louise	Westmount, Que.
*Cramp, Ethel	Coventry, England.
Cruikshank, Norma Leslie	Hamilton, Ont.
Dougall, Dorothy Webster	Westmount, Que.
Fritz, Madeleine Alberta	St. John, N.B.
Gibbs, Mary (B.Sc. Course)	Buckingham, Que.
Giles, Lila Foreman	Lachute, Que.
Graham, Elsie	North Bay, Ont.
Grindley, Fannie Madeline	Montreal, Que.
Hague, Helen Sarah	Montreal, Que.
*Lambert, H. Theodora	Montreal, Que.
*Levinson, Reba Hilda	Westmount, Que.
Lewis, Doris Ethel	Lachine, Que.
Lindsay, Marion Kathleen	Montpelier, Vt.
Livingstone, Sara Gladys	Montreal, Que.
*Louson, Margaret Louise M	Westmount, Que.
Macdonald, Brenda	Halifax, N.S.
Macdonald, Isabella Louise	Winnipeg, Man.
McLean, Melba Roberta	Outremont, Que.
McGregor, Phebe Lewis	Vancouver, B.C.
MacLennan, Agnes Helen B. (B.Sc. Course)	Chateauguay Basin, Que.
Macnaughton, Margaret Rose	Westmount, Que.
Mitchell, Beatrice Minerva	Levis, Que.
Monk, Elizabeth Carmichael	Montreal, Que.
Morgan, Nora Susan F	Westmount, Que.
*Ortenberg, Miriam	Montreal, Que.
Paterson-Smyth, Jessie Alice	Montreal, Que.
Pickel, Margaret Barnard	Cowansville, Que.
Potter, Anna Victoria	Montreal, Que.
Reid, Isabel Elizabeth	Montreal, Que.
Rogers, Ruth	Patten, Me.
Salomon, Ruth	Montreal, Que.
*Schuller, Riwka	Montreal, Que.
Swindlehurst, Ellen Louise	Montreal, Que.
Taylor, Mary McKendrick	Montreal, Que.
Wright, Annie Ethel	Westmount, Que.
Young, Marion Thompson	Quebec, Que.

FOURTH YEAR

(McGill College.)

†Bernstein, Felix	Montreal, Que.
Binmore, Thomas Victor (B.Sc. Course)	Outremont, Que.
Blampin, Wilfred Ellis	Westmount, Que.
Brady, William Homer	Frelighsburg, Que.

*Partial. †Double Course.

NAME	HOME ADDRESS
†Copeland, John Gardner	Cornwall, Ont.
†Dawson, Howard Le Rossignol	Westmount, Que.
Diner, Louis	Montreal, Que.
†Dowdall, Geoffrey Francis	Almonte, Ont.
†Eliasoph, Benjamin	Quebec, Que.
Green, Varian S.	Calgary, Alta.
Grosjean, Georges Francois	Montreal, Que.
†Heinbecker, Peter	Listowel, Ont.
†Henry, Leslie Stewart	Montreal, Que.
Hetherington, Cecil Henry	Breckenridge Station, Que.
†Lande, Joseph	Montreal, Que.
Presner, Philip	Montreal, Que.
Shulemson, Abraham	Montreal, Que.
†Strean, George	Montreal, Que.
Tartak, Elias	Novaya, Odessa, Russia.
Tsolainos, Kyriakos Pau	Montreal, Que.
†Usher, Saul J.	Montreal, Que.

(Royal Victoria College.)

Balfour, Jean	London, Ont.
Black, Dora I.	St. Johns, Que.
Cherry, Anna	Toledo, Ohio.
Duff, Ella Ishbel	Worcester, Mass.
Duval, Elsie C. M.	St. Johns, Que.
Forde, Roberta Napier	Montreal, Que.
Fowler, Lois Rowcliffe	Summit, N. J.
Gardner, Jessie Grace	Montreal, Que.
Goodwin, Ruth Annie	Westmount, Que.
Gray, Ethel Marguerite	Montreal, Que.
Greer, Frances Burriss	Westmount, Que.
Hay, Eleanor Clunie	Lachute, Que.
Hay, Mary Cameron	Lachute, Que.
Hibbard, Winifred M.	Westmount, Que.
Hurd, Mary Ivadell	Westmount, Que.
Kuhns, Alma Marie	Montreal, Que.
Muir, Mary Dale	Bradwardine, Man.
Patterson, Ida May	Lachute, Que.
Prowse, Grace Emily	Verdun, Que.
Salomon, Fanny	Montreal, Que.
Solomon, Sallie Gertrude	Montreal, Que.
Stamm, Bessie Gertrude	Norwich, Conn.
Taylor, Kathryn Ross	Westmount, Que.
Walker, Florence	Sydney, N.S.

†Double Course.

DEPARTMENT OF MUSIC.

Proceeding to the Degree of Mus. Bac.

FIRST YEAR

Aylen, Dorothea
MacKenzie, Lillian

SECOND YEAR

Casey, Henry
Katz, Edward
Oughtred, Eleanor
Singleton, Corinne
Taylor, Leslie

Proceeding to the Diploma of Licentiate in Music

FIRST YEAR

Cox, Eleanor
Newton, Mrs. R.
Rogers, Starr
Young, Abigail

SECOND YEAR

Bagan, Marian
Gittleson, Gertrude
Ramage, Annie F.

THIRD YEAR

Burrell, Irene
Hoffman, Hazel
Duncan, Ruth M.
Pena, Irene

Senior Partial Students

Asner, Esther
Belle Isle, Louis
Bennett, Margaret
Benoit, Viola
Birkett, Winifred
Blachford, Marjorie
Black, Dora
Bruce, Lorna
Buck, Ruth
Burnett, James F.
Chapman, Irene
Cole, Matilda
Cook, Audrey
Coveller, David
D'Amour, Rénée
Drysdale, Edna
Drysdale, Ellen A.
Elsy, Edna
Fetherston, Hazel
Fletcher, Marion
Flett, Ruth
Gagnon, Irene
Gates, Rhea
Gittleson, Ruth
Grondines, Yvette
Hazen, Mrs. C. R.
Hertz, Elizabeth
Hodgson, J. A.
Howard, Marguerite
Johnson, Edith M.
Jones, Nellie
Jonson, Mrs. S.
Kahan, Tamara
Leach, Hazel R.
Lefebvre, Mrs. V.
Lipsey, Sadie
Lutton, Dorothy
McCaw, Gladys
MacLaren, Elizabeth
McMartin, Edith
MacPhail, Dorothy
Manning, Gertrude
Miller, Anne
Mills, Evelyn
Neumann, Grace
Norris, Gwendolyn
Ogilvie, Marion
Percival, Lillian
Percival, Muriel
Phelps, Roberta
Rose, Rosalie
Rothschild, David
Smith, Edna H.
Stott, Doris
Torvas, Albert
Watt, Violet
Wilson, Kate

FACULTY OF APPLIED SCIENCE.

FIRST YEAR

NAME	HOME ADDRESS	SCHOOL LAST ATTENDED
Acton, Harold Joseph	Montreal, Que.	Mount St. Louis College.
Bailey, Maxwell Samuel	Montreal, Que	Montreal High School.
Bain, George William	Lachute, Que	Lachute Academy.
*Bethune, John Strachan T	Montreal, Que	Lower Canada College.
Binmore, George Bedell	Outremont, Que	Montreal High School.
Bissell, Harold Rodolph	L'Original, Ont	Lakefield Continuation School.
Boronow, Walter George	Westmount, Que	Hoscote Coaching Establishment.
Brault, Paul George Adrian	Outremont, Que	Mount St. Louis College.
*Brooks, John Kenneth	Montreal, Que	Bishop's College School.
Brow, James Barrett	Charlottetown, P.E.I.	Prince of Wales College.
Brown, Lawrence Elliott	Ottawa, Ont	Ottawa Collegiate Inst.
Bush, Harold Frederick	Ottawa, Ont	Ottawa Collegiate Inst.
Canning, Dow Vernon	Westmount, Que	Montreal High School.
Carroll, Thos. Gilbert Gerard	Montreal, Que	Catholic High School.
Challenger, Jas. Othniel	Basseterre, St. Kitts, B.W.I	St. Kitts-Nevis Grammar School.
*Clouston, Jas. Campbell	Montreal, Que	Montreal High School.
Connell, Gerald	Ottawa, Ont	Ottawa Collegiate Inst.
Crawford, Robt. Eric A	Montreal, Que	Montreal High School.
Cromwell, Alexander Ross	Cookshire, Que	Cookshire Academy.
Cross, George Esplin	Westmount, Que	Westmount High School.
Cuddy, John Michael	Montreal, Que	Loyola College.
Doiron, Jos. Anthony Claude	Shediac,, N.B	Shediac Grammar School.
Dubnitsky, Joseph	Montreal, Que	Montreal High School.
Fisk, George Harold	Montreal, Que	Montreal High School.
Fortin, Gaston Lalonde	Ottawa, Ont	Mount St. Louis College.
Gardner, John George	Montreal, Que	Montreal High School.
Gauthier, Paul Gilles	Outremont, Que	Montreal High School.
Glen, Alexander Fulton	Ste. Agathe des Monts, Que	Montreal High School.
Gliddon, Claude	Ottawa, Ont	Ottawa University.
Grout, Geo. Dixon Bourchier	Ottawa, Ont	Ottawa Collegiate Inst.
Gualtieri, Santo	Thorold, Ont	Thorold High School.
Hamilton, Herbert James	Westmount, Que	Hoscote Coaching Establishment.
Henderson, Conway H. D	Westmount, Que	Wykeham House School.
*Hill, Stanley C. H	Richmond, Que	St. Francis College High School, Richmond.
Jackson, Carl Henry	Montreal, Que	Montreal High School.
Jordan, Herbert Scott	Westmount, Que	Westmount High School.
Joseph, Hy. Thos. Gratz	Montreal, Que	Lower Canada College.
Kennedy, Charles Laurence	Parkdale, Man	St. John's College, Winnipeg.
Livingstone, Kenneth M	Washington, D.C	Central High School, Washington.
McCullough, Albert Edward	St. Albans, Vt	St. Albans High School.
McDonald, Hugh Ronald	Ottawa, Ont	Mount St. Louis College.
McDougall, Hamilton Donald	Montreal, Que	University School, Victoria, B.C.
MacGlashan, Lionel C	Vaudreuil Stn., Que	Stanstead College, Que.
Mackenzie, Donald Gordon	Montreal, Que	Wykeham House School.
McLennan, Gordon Roderick	Ottawa, Ont	Ottawa Collgiate Inst.
Maxwell, Edwzrd Blythe	Montreal, Que	Lower Canada College.
Meehan, Philip Gerald	Montreal, Que	Mount St. Louis College.

*Partial.

NAME	HOME ADDRESS	SCHOOL LAST ATTENDED
*Moas, Manuel	Havana, Cuba	Mount St. Louis College.
Moore, Melville Johnson	Montreal, Que	Commercial & Technical High School.
Morrison, David Reid	Westmount, Que	Westmount High School.
O'Halloran, James	Ottawa, Ont	Ottawa Collegiate Inst.
O'Sullivan, Louis	Montreal, Que	Valleyfield College.
Ouellette, Paul	Outremont, Que	Hoscote Coaching Establishment.
Patterson, Kenneth Breck	Westmount, Que	Westmount High School.
Pevzner, Isidore	Montreal, Que	Montreal High School.
Phelan, Thomas Enslow	Westmount, Que	Mount St. Louis College.
Quinlan, James T	Westmount, Que	Catholic High School.
Rodier, Paul Gies	Westmount, Que	Ste. Marie College.
Salamis, Basil	Leka, Samos, Greece	Private Tuition.
Shotwell, John Stewart G	Ottawa, Ont	Harrison College, Barbados, B.W.I.
Soucy, Robert	Montreal, Que	Hoscote Coaching Establishment.
Spratt, Maynard Jas. C	Ottawa, Ont	Ottawa Collegiate Inst.
Steacie, Edgar Vm. Richard	Westmount, Que	Westmount High School.
Stroud, William Dicker	Montreal, Que	Stanstead College, Que.
Tansley, Wilfred	Montreal, Que	Harbord Collegiate, Toronto.
Tremblay, Felix	Baie St. Paul, Que	Ecole Polytechnique, Montreal.
Turton, Victor Herbert	Westmount, Que	Westmount High School.
Van Etten, Fred B	Kingston, N.Y.	Kingston High School.
Winter, Frederick Roberts	Westmount, Que	Montreal High School.
Yates, Christopher Montagu	Montreal, Que	St. Alban's School, Brockville.

SECOND YEAR

NAME	HOME ADDRESS
Bradley, Herbert Ellison	Smith's Falls, Ont.
Calkin, Darrell Lorraine	Kentville, N.S.
Cambron, Adrian	Sherbrooke, Que.
Cloutier, George Edwin Jos	Montreal, Que.
Cohen, Joseph	Ottawa, Ont.
Cromwell, Hary Roy	Sawyerville, Que.
Cunningham, Frederick Jas	Ottawa, Ont.
Deneau, Gastor	Montreal, Que.
Dewar, Charles Leonard	Ottawa, Ont.
Dunbar, John Robert	Ottawa, Ont.
Durnford, Alex Tilloch Galt (Arch.)	Montreal, Que.
Edwards, Gordon Maxwell Meighen	Ottawa, Ont.
Elder, John Campbell	Montreal West, Que.
*Elliot, Gerald Burton	Westmount, Que.
*Erlenborn, Will	Westmount, Que.
Farnsworth, Arthur Leslie	Cookshire, Que.
Fraser, Walter L	Burford, Ont.
Gibbs, John Hodgson	Buckingham, Que.
Goodman, Charles Davis (Arch.)	Montreal, Que.
Gravel, Emile	Levis, Que.
Hannan, James Jr	Irvington, N.Y.
Hart, Lawrence Folger Carleton	Ottawa, Ont.
†Henry, Leslie Stewart	Montreal, Que.
Jue, Peter Bay	Montreal, Que.
*Kirk, Edward William	Rawdon, Que.
Labell, Maurice Nelson	Mansonville, Que.
Lafontaine, Gerard H	Montreal, Que.

*Partial. †Double Course.

Name	Home Adiress
Larose, Paul	Montreal, Que.
Lyman, Walter K. Gordon (Arch.)	Montreal, Que.
Macdonald, Dan	Spring Hil, Que.
Millar, Thomas Boyd	Portage La Prairie, Man.
Muir, Wilson James	Westmoun, Que.
Perriton, Douglas Eric	Westmoun, Que.
Powell, John Murray	Ottawa, Ont.
Quaile, Thomas Edward Henry	River Desrt, Que.
Ross, James Hamilton	Montreal, Que.
Schippel, Walter Herbert	Outremont Que.
Thomson, Walter Wilfred	Outremont Que.
Wiggs, Gordon Lorne	Quebec, Que.
Windsor, J. Rorke	Westmount, Que.

THIRD YEAR

Amdur, Leon	Montreal, Que.
Anderson, Clayton Earle	Ottawa, Ont.
Beach, Donald Johnston	Ottawa, Ont.
Betournay, J. Noé	St. Lambert, Que.
Bourret, Paul	Montreal, Que.
Brennan, Herbert Joseph	Westmount, Que.
Brennen, James Hugh	Westmount, Que.
Buchanan, Archibald Colin	Levis, Que
Clarke, Richard G	Bear River, N.S.
Code, Francis Leslie	Ottawa, Ont.
Demers, Paul Emile	Montreal, Que.
Dyer, Harry O'Regan	Sutton, Que.
Edward, Arthur James	Ottawa, Ont.
Fox, Hugh Dean	Montreal, Que.
Gerez, José M	Ottawa, Ont.
*Gibbs, William G	Buckinghan, Que.
Heeney, Terrance James Clifiord	London, Ont.
Hoichberg, Harry	Montreal, Que.
Jacquemart, René	Montreal, Que.
*Karnes, Harry V	Kansas City, U.S.A.
Kearns, William Francis	Ottawa, Ont.
Kelly, J. L	Buckinghan, Que.
Laing, Richard Ross	Westmount Que.
Lake, Norman John	Brantford, Ont.
Lamontagne, Henri Gaston	Montreal, Que.
Lawrence, Harold George	St. John, N.B.
Lee, Harold Carleton	St. John, N.B.
Levitt, Ephraim	Montreal, Que.
Louttit, William Charles	Montreal, Que.
McLellan, Harold Elmer	Summerside, P.E.I.
Mahaffy, Herbert Lawrence	Montreal, Que.
Mouquin, Henri, Jr	Sparkhill, N.Y.
Parsons, Frederick Sidney	East Angus Que.
Patten, Roy Hamilton	St. George P.O., Ont.
Pitt, Sylvester Sheridan	Montreal, Que.
*Potts, Allen Dewey	Rolla, Mo., U.S.A.
Proudfoot, David Gibb	Montreal, Que.
Rashback, Harry Hymen	Montreal, Que.
Skarin, Emil	Edmonton, Alta.
Smith, Donald T	Westmount Que.
Standish, Samuel James	Waterloo, Que.
Thompson, Grattan Dalrymple (Arch.)	Montreal, Que.
Thompson, Trevor Creighton	Montreal, Que.
Tousaw, Albert Anderson	Westmount Que.
Walker, Melvyn Lothian	Pointe Gatneau, Que.

*Partial.

FOURTH YEAR

NAME	HOME ADDRESS
Blachford, Henry Lloyd	Montreal, Que.
Camp, Eric Willian	Montreal, Que.
Cann, Frederick Lorne	Peterborough, Ont.
Conroy, Joseph Matthew	Ottawa, Ont.
Crombie, Hugh Athur	Toronto, Ont.
Dionne, Joseph Alexandre	Montreal, Que.
Doran, James	Montreal, Que.
Dorken, Herman Rudolf	Westmount, Que.
Dunbar, Donald Gray	Hopewell, N.S.
Fenster, Moses (Arch.)	Montreal, Que.
Ferguson, George Harry	Nelson, B.C.
Fox, Thomas John Joseph	New York, N.Y.
Greaves, Clifford	Barbados, B.W.I.
Jordan, Leo Joachm	Lindsay, Ont.
Livingstone, Edward Arch	Washington, D.C.
McCutcheon, Manord Wendell	Montreal, Que.
Marquette, Hecto	Westmount, Que.
Moore, William McLean	Sydney, N.S.
Parke, Charles Sager	Hamilton, Ont.
Patterson, James	Montreal, Que.
Pelletier, Henri Burroughs	Montreal, Que.
Roscoe, Harold Morton	Centreville, N.S.
Sutherland, Dan McLeod	New Glasgow, N.S.
Thomas, Philip (Arch.)	Montreal, Que.
Wallace, George Arthur	Granby, Que.
Way, William Rusell	Montreal, Que.
Weibel, Emil Edwin	Montreal, Que.

FACULTY OF MEDICINE.

FIRST YEAR

NAME	HOME ADDRESS	SCHOOL LAST ATTENDED
Adams, Earl Hay	Pointe Claire, Que.	Westmount High School.
Allicock, Robt. Alexander	Boston, Mass.	Queen's College, British Guiana.
Bassen, Edward Joseph	St. John, N.B.	St. John High School.
Baxter, Joseph Murray	St. John, N.B.	St. John High School.
Benjamin, Ben, BA	Montreal, Que.	Montreal High School.
Block, Julius	Westmount, Que.	Montreal High School.
*Boon, George Arthur	Longueuil, Que.	Commercial & Technical High School.
Boucher, Pierre Ange	Brockton, Mass.	University of Ottawa.
Breitman, HarryBenjamin	Montreal, Que.	Montreal High School.
Brouse, Ivan Edvin	New Denver, B.C.	King George High School Vancouver, B.C.
Buckman, Charles	Montreal, Que.	Quebec High School.
Burgess, Carl Avard	Moncton, N.B.	Mount Allison University.
Bussière, Henry Charles	Montreal, Que.	Catholic High School.
Cashin, Martin F.	St. John's Nfld.	St. Bonaventure's College.
Collins, Charles Henry	Saranac Lake, N.Y.	Saranac Lake High School.
Collins, Theophilis Theo	Boston, Mass.	Queen's College, British Guiana.
†Copeland, John Gardner	Cornwall, Ont.	Cornwall High School.
Corrigan, John A	Ottawa, Ont.	Ottawa University.

*Partial.

NAME	HOME ADDRESS	SCHOOL LAST ATTENDED
Coughlin, John Edward D.	Montreal, Que.	Shortel's Academy.
Curtis, Edwin Johnston	Vancouver, B.C.	University Tutorial College, Vancouver.
†Davis, Archie	Lachine, Que.	Lachine Academy.
de Grandpré, Gerard C.E.	Plattsburg, N.Y.	Ottawa, College.
Dickey, Ernest	Perdue, Sask.	Private Tuition.
Donnelly, Russell H.	St. John, N.B.	St. John High School.
Drabkin, Charles	Montreal, Que.	Montreal High School.
Druckman, Karl, B.A.	Montreal, Que.	Gymnasium, Sereth, Austria.
Elliot, Spencer Graham	Forget, Sask.	University of Manitoba.
Feigenbaum, Benjamin	Montreal, Que.	Montreal High School.
Fluhmann, Chas. Frederic	Kenogami, Que.	High School of Quebec.
Fox, Charles Brendan	St. John's Nfld.	St. Bonaventure's College.
Gauthier, Fernando	Matheson, Ont.	Sacred Heart College, Sudbury, Ont.
George, Dixon McDonald	Eganville, Ont.	Ottawa Collegiate Inst.
Goldberg, Louis	Montreal, Que.	Montreal High School.
Goldhamer, Peter	Montreal, Que.	Montreal High School.
Goldman, Solomon	N. D. de Grace, Que.	Montreal High School.
†Golt, Moses Israel	Montreal, Que.	Ottawa Collegiate Inst.
Griffin, Charles Norman	Paradise, Montserrat, B.W.I.	Antigua Grammar School.
*Harwood, William Liddell	Montreal, Que.	Woodstock Baptist College.
Hynes, John Story	Kensington, P.E.I.	St. Dunstan's College.
Johnson, Francis Bell	Montreal, Que.	Catholic High School.
Karam, Elias John	Ottawa, Ont.	St. Bridget's School, Ottawa.
Katzman, Harold	Utica, N.Y.	Utica Free Academy.
Kearns, Hubert John	Chesterville, Ont.	Chesterville High School.
Kearns, Walter P.	Chesterville, Ont.	Chesterville High School.
King, Gerald Hammond	Chipman, Queen's Co. N.B.	Mount Allison Academy.
Klein, David	Montreal, Que.	Montreal High School.
Laishley, Wilfred	Ottawa, Ont.	Ottawa Collegiate Inst.
Lambly, Comrie Stewart	Montreal, Que.	Shortell's Academy.
Levin, Leon	Montreal, Que.	Montreal High School.
Levin, Tom	Montreal, Que.	Montreal High School.
Lewis, Mortimer Harold	Utica, N.Y.	Syracuse University.
†Lipsey, Hyman	Westmount, Que.	Montreal High School.
Livshin, Nathan	Syracuse, N.Y.	Syracuse University.
McCloskey, Francis Leo	Chesterville, Ont.	St. Francis Xavier's College, Antigonish.
McGregor, John	Victoria, B.C.	Victoria High School.
MacLean, Chester Peter	Mitchell River, P.E.I.	Prince of Wales College, P.E.I.
MacLellan, Donald Francis	Glenville, N.S.	St. Francis Xavier's College, Antigonish.
MacMillan, Douglas W.	Crysler, Ont.	Cornwall High School.
McNamee, Francis Patrick	Victoria, B.C.	Victoria High School.
Maillard, Edgar R.	Trinidad, B.W.I.	St. Mary's College.
Markowitch, Max	Montreal, Que.	Montreal High School.
Markson, Simpson	Montreal, Que.	Alexandria High School.
Martin, Wilfrid Augustine	Kingston, Ont.	Ottawa University.
Messinger, Moses Joseph	Montreal, Que.	Montreal High School.
Mills, Edward S.	Ormstown, Que.	Montreal High School.
Morgan, Philip John George	Ottawa, Ont.	Sorel Academy.
*Moskovitch, Harry	Montreal, Que.	Shortell's Academy.
Murphy, Brendan William	Halifax, N.S.	Dalhousie University.
O'Neill, John Philip	St. John, N.B.	St. Joseph's College.

*Partial. †Double Course.

NAME	HOME ADDRESS	SCHOOL LAST ATTENDED
O'Shaughnessy, Peter Earle	Cobalt, Ont.	Haileybury High School.
Parke, George Kenneth	Pointe Claire, Que.	Montreal High School.
Parsons, Cecil James F.	Harbour Grace, Nfld.	Bishop Field College.
Patterson, James Duke	Montreal, Que.	Hoscote Coaching Establishment.
Pelletier, Emery	Providence, R.I.	Morris Height Preparatory School.
Potter, Carlyle Thornton	Montreal, Que.	Strathcona Academy.
Robertson, George Henry	Jamaica, B.W.I.	Potsdam, Jamaica, B.W.I
Romaniuk, Nicetas		Manitoba University.
†Rothschild, David	Westmount, Que.	Westmount High School.
Ryan, John Thomas	Montreal West, Que.	Mount St. Louis College.
Schmidt, Otto Victor	Montreal, Que.	Montreal College.
Shapiro, Harry	Montreal, Que.	Montreal High School.
Sharp, Harold Hayes	Sussex, N.B.	Sussex High School.
Smith, John Walter	Lachute, Que.	Lachute Academy.
Stenson, Walter Thomas	Sherbrooke, Que.	St. Charles College, Sherbrooke.
Summers, Russel	Outremont, Que.	Cornwall High School.
Thomas, Reynald	St. John's Nfld.	St. Bonaventure's College.
†Usher, Barney David	Montreal, Que.	Montreal High School.
Watson, Edgar Robert	Hawkesbury, Ont.	Almonte High School.
Wert, Ford Bush	Avonmore, Ont.	Avonmore High School.
Whiting, Richard Charles	Westmount, Que.	Wesley College, Winnipeg
Wittenberg, Samuel Simon	Montreal, Que.	Montreal High School.

SECOND YEAR

NAME	HOME ADDRESS
Aarons, Morton Joseph	Utica, N.Y., U.S.A.
Beall, Franklin George Lemo	Westmount, Que.
Beamish, Oswald Foster	Billings Bridge, Ont.
Behan, Edmund Joseph	Pembroke, Ont.
†Bernstein, Felix	Montreal, Que.
Bourret, Reginald Charles J.	Montreal, Que.
Bristol, John LeVarrie	Grenada, B.W.I.
Browne, Trevor Goff	Melville, Sask.
Candlish, Henry Maiben	Outremont, Que.
Cassidy, Gordon James	Quebec, Que.
Chandler, Edward Bremner	Moncton, N.B.
Cooder, Howard Russell	Montreal, Que.
Crewson, Walter Lionel	Alexandria, Ont.
Cully, James Henry	Pembroke, Ont.
†Dawson, Howard Le Rossignol	Westmount, Que.
†Dowdall, Geoffrey Francis	Almonte, Ont.
DuVernet, Edward Oliver	Digby, N.S.
Eakin, William Wilson	Westmount, Que.
†Eliasoph, Benjamin	Quebec, Que.
Emerson, C. Leonard	St. John, N.B.
Fink, Charles Telesphore	Mattawa, Ont.
Foran, Herbert Paul	Montreal, Que.
Freedman, Morris	Montreal, Que.
Gaboury, Hector	Alfred, Ont.
Grant, Joseph Howe Brownell	Port Elgin, N.B.
Greenberg, Moses	Montreal, Que.
Gross, Harry S.	Montreal, Que.
Harkin, George H.	Vankleek Hill, Ont.
Hawthorne, Allan Blackall, B.A.	Westmount, Que.
†Heinbecker, Peter	Listowel, Ont.
*Henry, Chas. Blanchard	Montreal, Que.
Hornbeck, Charles Sahler	Kingston, N.Y.
Humphreys, John Charles	Kinburn, Ont.

*Partial. †Double Course.

NAME	HOME ADDRESS
Hutchison, Keith Ogilvie	Montreal, Que.
Ironstone, Paul Stanley	Sudbury, Ont.
Jamieson, Wm. Dawson Stuart	Clapham, Que.
Jones, Cyprian Chandler	Jamaica, B.W.I.
Kearns, Peter Joseph	Kenmore, Ont.
Kenning, Stuart Guthrie	Victoria, B.C.
Lally, Louis Michael John	Ottawa, Ont.
†Lande, Joseph	Montreal, Que.
Landor, Robert Daniel	Canton, Ohio.
Levitt, Abel	North Bay, Ont.
*Macdonald, Douglas O	Sutton, Que.
McDonald, John	Warren, Ont.
McGillivray, Alex. Malcolm	Dalkeith, Ont.
McIntyre, Preston	Montague, P.E.I.
MacLean, Basil Clarendon	Montreal, Que..
Malamud, William	Montreal, Que.
Mapplebeck, Thomas Eric	Rochester, N.H.
Murray, John Stewart	River John, N.S.
Paradis, Charles Ovide	Bessemer, Mich.
Patterson, Robert Earle	Merigomish, N.S.
Robillard, John Joseph	Ottawa, Ont.
Rosenfeld, Joseph E	Battle Creek, Mich.
Ryan, Eric James	Westmount, Que.
Scherzer, Morris	Montreal, Que.
Shapiro, Charles Engleson	Ottawa, Ont.
Silverman, Benjamin	Montreal, Que.
Smith, Herbert Bryant	Gloversville, N.Y.
Strasburg, Alexander	Montreal, Que.
†Strean, George	Montreal, Que.
Thompson, Eustace Edmund	Georgetown, Br. Guiana.
†Usher, Saul J	Montreal, Que.
Walters, Lawrence J	Ottawa, Ont.
Whitebread, John	Nelson, B.C.
Whiting, Harry St. John	Westmount, Que.
Wyseman, Roderick Randolph	Trinidad, B.W.I.

THIRD YEAR

Ainsley, Henry Bryson	Tupper Lake Jct., N.Y.
Beattie, William Walter, B.A	Montreal, Que.
Bolt, William	St. John's Nfld.
Brow, George Raymond	Charlottetown, P.E.I.
Brown, Herbert Stanley	Cornwall, Ont.
Cahalan, Richard Edward	Wyandotte, Mich.
Campbell, Henry	Montreal, Que.
Casselman, Hubert Haldane Lee	Winchester, Ont.
Cassidy, Halton Creighton, B.A	Montreal, Que.
Coulson, Robt. Berry McAllan	Westmount, Que.
Duffy, Joseph Leonard	Montreal, Que.
Eaton, Carl Margeson	Truro, N.S.
Ellis, Harold Lloyd	Kingstown, St. Vincent, B.W.I.
Farmer, Vincent	Vankleek Hill, Ont.
Ferguson, William Ewart	Edmonton South, Alta.
Fournier, Dudley	Sudbury, Ont.
Fraser, Alex Ashley	Lakefield, Ont.
Gilhooly, Joseph Patrick	Ottawa, Ont.
Gillander, Henry Edwin, B.A	Lemesurier, Que.
Goodrich, Blynn Orville	Skowhegan, Me.
Gordon, John Keith	Winnipeg, Man.
Henderson, Marshall Waitt	Victoria, B.C.
Henderson, William Ewart	Chilliwack, B.C.

*Partial. †Double Course.

NAME	HOME ADRESS
Heney, Vincent Paul	Ottawa, Ont.
Holling, Stanley Arnold, B.A.	Westmount, Que.
Jones, Francis Edward	Ottawa, Ont.
Kramer, Raymond Walter Irwin	St. Jerome, Que.
Little, George Douglas	Outremont, Que.
Lozinsky, Ezra	Montreal, Que.
McCaffrey, Lawrence Edward	Ormstown, Que.
MacDougall, James A.	Grand River, P.E.I.
McEwen, Charles Stuart	Montreal, Que.
McLellan, Wilfrid Gillies, B.A.	Montreal, Que.
Malo, Robert Florent	Sudbury, Ont.
Markson, Moses	Alexandria, Ont.
Monahan, John Thomas	Starksboro, Vt.
Moret, Herman	Sion, Valois, Switzerland.
Moyse (Moisescu), Manole Don	Montreal, Que.
Notkin, Louis J.	Montreal, Que.
Notkin, Meyers	Montreal, Que.
Ofiesh, Kanaan Fares	Montreal, Que.
Parsons, Arthur Reginald	Coley's Pt, Bay Roberts, Nfld.
Pendrigh, Robert Murray	St. John, N.B.
Power, Richard Michael	Quebec, Que.
Riddell, Arthur Ezra	Morrisburg, Ont.
Ross, Dudley Eyre	Elora, Ont.
Ruby (Rabinovitch, Carl	Montreal, Que.
Ryan, Clarence Albert	Vancouver, B.C.
Segall, Harold Nathan	Montreal, Que.
Smith, James Wallace Hepburn	Montreal, Que.
Stuart, William Charles, B.Sc. (Arts)	Hoboken, N.J.
Swim, Frank Lloyd, B.A.	Doaktown, N.B.
Taylor, Clifford Ethridge	Cobalt, Ont.
Trainor, Owen Connolly	Charlottetown, P.E.I.
Tremble, George Edward	Montreal, Que.
Tweedie, William C.	Rockland, Ont.
Viner, Abraham Korah, B.A.	Montreal, Que.
Waugh, Theodore Rogers	St. Albans, Vt.
Whitcomb, Harold Austin	Smith's Falls, Ont.
Williamson, Norman Trenholm	Westmount, Que.
Wilson, Percy Milton	Vancouver, B.C.
Witzling, Philip	Montreal, Que.
Young, Arthur Wilson	Revelstoke, B.C.

FOURTH YEAR

Aikens, Charles Ernest	Guysboro, N.S.
Almond, Frank Willis	Boise, Idaho.
Auerbach, Wolf	Montreal, Que.
Backus, Percy Lavern	Edgerton, Alta.
Barnhart, Walter Simpson	Ottawa, Ont.
Belyea, George Nelson	Coldstream, N.B.
Boone, Storer Woodford	Presque, Isle Me.
Bowles, Albert Webster	Biggar, Sask.
Branch, Edmund Arnold G.	Antigua, B.W.I.
Caldwell, D. Manchester	Arnprior, Ont.
Cameron, Arthur Hugh	St. Peter's C.B.
Challenger, Neville E.	St. Kitts, B.W.I.
Christie, John Ed., B.Sc.	Lachute, Que.
Coote, Frank Taschereau	Quebec, Que.
Cross, John Samuel	Ottawa, Ont.
da Silva, Austin P.R.	Georgetown, Br. Guiana.
Dickson, Frederick Russell	Montreal, Que.
Empay, Howard S.	Edmonton, Alta.
Fleck, William Westwood	Montreal, Que.
Fraser, Donald	Stratford, Ont.

Name	Home Address
Frawley, John Milan	Sudbury, Ont.
Freedman, Nathaniel	Montreal, Que.
Friefeld, Gilbert Harry	Montreal, Que.
Garber, Hyman	Montreal, Que.
Gareau, Urban J.	Ottawa, Ont.
Gibb, Stewart H.	Westmount, Que.
Goodridge, Leslie Ayri	Bridgetown, Barbados.
Gregory, Henry Bascom	St. Philip, Barbados.
Hankinson, Cecil Hazen	St. Thomas, Ont.
Hill, Wm. Hawksley	Edmonton, Alta.
Hindson, John Cooper	Regina, Sask.
Isaacman, Abraham	Montreal, Que.
Kaufmann, Mark	Montreal, Que.
Kennedy, Alexander	Antigonish, N.S.
Ladouceur, Frederic	Hawkesbury, Ont.
LeBel, Moise Wm.	Ottawa, Ont.
Leggo, Ralph Christopher	Ottawa, Ont.
Lerner, Leiber Wolfe	Quebec, Que.
Levitt, Nathan	Montreal, Que.
Lowry, George Leonard	Carp, Ont.
McCabe, Charles Penny	Pictou, N.S.
McCarville, Charles Raymond	Kinkora, P.E.I.
McCreary, S. Russell, B.Sc.	Toronto, Ont.
McCullough, John Thomas	St. Mary's, Ont.
McDonald, Angus Lawrence	Penetanguishene, Ont.
McLean, Aubrey Bertram	Port Hood, N.S.
MacPherson, Donald Alexander	Bellevue, P.E.I.
Nathanson, Joseph Nathan	Ottawa, Ont.
Newhook, William H.	Carbonear, Nfld.
Novak, Gregory	Model Farm, Sask.
Pardoe, John Borden	Camanche, Cal.
Pickup, Wm. Alfred	Granville Ferry, N.S.
Rankin, Bertrand Fred	Corpus Christi, Texas.
Read, Walter W.	Halifax, N.S.
Riopel, Jos. Henri	Morinville, Alta.
Roman, Chas. Lightfoot	Bay City, Mich.
Sample, Leon Ernest	Notre Dame de Grace, Que.
Savory, Philip Maxwell H.	Georgetown, B.G.
Sicard, Lionel John	Buckingham, Que.
Street, John Archibald	Vancouver, B.C.
Swancesky, Francis V.	New Westminster, B.C.
Tallon, John Alexander	Cornwall, Ont.
Tenney, Roy Edward	Wabasha, Minn.
Throop, Wilfred Earle	Brockville, Ont.
Trossman, Isidore	Montreal, Que.
Upham, George Ashton	Miocene P.O., B.C.
Ward, Norman Claude	Kentville, N.S.
Wheaton, Hazen Ashley	Petitcodiac, N.B.
Wienke, Chas. Edward	Pembroke, Ont.
Williams, John Rainford	Jamaica, B.W.I.
Williamson, Ralph MacAlpine	Regina, Sask.
Wright, Henry Stanley	Lower Southampton, N.B.
Young, Herbert Maitland	Montreal, Que.

FIFTH YEAR

Alden, Augustus Elihu	Lowell, Mass.
Bell, J. Alex. McLean	Teeterville, Ont.
Bloomberg, Max William, B.A.	Montreal, Que.
Britton, Henry Earle	Pugwash, N.S.
Brown, Bryce Alexander	Cornwall, Ont.
Brown, Elfric Drew	Owen Sound, Ont.
Brown, Elton Clifford	Montreal, Que.
Browne, J. Carlind	Westmount, Que.
Burrows, Newton Smith	Guelph, Ont.

Name	Home Address
Busby, E. M, B.A.	Ottawa, Ont.
Calder, John Roger	Lachute, Que.
Carter, Ernest Berchmore	Barbados, B.W.I.
Chantal, Leonard Eric	Grenville Bay, Que.
Cheeseman, George Albert	London, England.
Clements, Clifford Gibson	Wapella, Sask.
Cochrane, William John	Victoria, B.C.
Cross, George Bond	Trinity, Nfld.
Dean, Joseph Russell, B.A.	Clarenceville, Que.
del Valle, Carlos Manuel	Porto Rico, W.I.
Derick, Clifford Lambie	Noyan, Que.
Dickie, John Barrie	Truro, N.S.
Donnelly, Francis James	St. John, N.B.
Dowd, William Ritchie, B.A.	Ottawa, Ont.
Duck, Charles William	Victoria, B.C.
Dursthoff, Leonard C.	Lowell, Mass.
Elkington, Eric H. W.	Duncan, B.C.
Fawcett, John Purvis	Hamilton, Ont.
Finklestein, Marcus Philip	Montreal, Que.
Francis, Oliver Michael	St. Davids, Grenada, B.W.I.
Gannon, John William, B.A.	Glace Bay, N.S.
Goldfield, Louis	Hartford, Conn.
Greenwood, Allan Hamilton	St. Catharines, Ont.
Greenwood, Frederick Cyril	St. Catharines, Ont.
Hamilton, Maurice Cayley	Cornwall, Ont.
Hillier, Leland Glen	Leamington, Ont.
Hustler, William Henry	Edmonton, Alberta.
Keefe, William John	Alberton, P.E.I.
Kenning, Gordon Colfax	Victoria, B.C.
LeMay, Joseph Albert	Ottawa, Ont.
Loughery, Crandall	Norton, N.B.
MacArthur, Robert Alexander	Detroit, Mich.
McGregor, Thomas D'Arcy	Schreiber, Ont.
McKenzie, John Wendell, B.A.	Charlottetown, P.E.I.
MacLauchlan, Robert Henry	Calgary, Alta.
McLeod, William McLaren	Montreal, Que.
McMurtry, Gilbert John	Kinburn, Ont..
Mars, John F.	New York City, N.Y.
Morrish, Walter	Shrewsbury, England.
Morse, Harry Dodge	Berwick, King's Co., N.S.
Naihouse, Morris	Montreal, Que.
Newsam, Arthur Roland	Barbados, B.W.I.
O'Brien, Stephen Henry	Ottawa, Ont.
Patrick Ivan Young	Halifax, N.S.
Patterson, Peter Harrold	Vancouver, B.C.
Pitts, Harry Herschel	Nelson, B.C.
Reid, Ferdinand Theodore	Jamaica, B.W.I.
Ritchie, Noel Robert	Aylmer East, Que.
Robillard, Henry Joseph	Ottawa, Ont.
Scott, Wm. Earl	Hudson, Que.
Seaman, Rupert Frederick	Charlottetown, P.E.I.
Skeete, Harold Edward	Barbados, B.W.I.
Smelzer, Donald Campbell	Montreal, Que.
Smith, George Leamus	Charlottetown, P.E.I.
Stewart, Clarence James, B.A.	Montreal, Que.
Stoughton, Dwight Harold	Hartford, Conn.
Struthers, Robert Rolf	Sudbury, Ont.
Sullivan, Daniel Cornelius	Arnprior, Ont.
Taylor, Henry D.	Toronto, Ont.
Taylor, Ross Burt	Cobalt, Ont.
Tuohey, Cedric Edward Moody	Victoria, B.C.
Turney, Herbert Wm.	Trenton, Ont.
Warren, Joseph Rainford	Boston, Mass.

STUDENTS IN DENTISTRY.

FIRST YEAR

NAME	HOME ADDRESS	SCHOOL LAST ATTENDED
Auclair, Alfred Stanley	St. Jean Baptiste, Rouville Co., Que.	Feller Institute.
Bernfeld, Benjamin	Montreal, Que.	Montreal High School.
Dance, James	Montreal, Que.	Carnforth School.
DesLauriers, Geo. Albert	Ste. Anne de Bellevue, Que.	Montreal Catholic High School.
Diamond, Max	Montreal, Que.	Private Tuition.
Fels, Gerald Bernard	Montreal, Que.	Montreal High School.
*Fuerst, Simon	Montreal, Que.	Montreal High School.
†Goldwater, Ephraim	Lachine, Que.	Lachine Academy.
Gottlieb, Henry	Montreal, Que.	Montreal High School.
Handelmann, Abram I.	Montreal, Que.	Commercial & Technical High School.
Hough, Henry William	Avonmore, Ont.	Avonmore School.
Hyams, Bernard Lawrence	Montreal, Que.	Montreal High School.
Kutzman, Ernest Abraham	Montreal, Que.	Private Tuition.
Ratner, Michael	Montreal, Que.	Montreal High School.
Rosenbaum, Frank Leon	Montreal ,Que.	Montreal High School.
Salomon, Nathan	Montreal, Que.	Montreal High School.
Shklar, Louis	Montreal, Que.	Private Tuition.
Swancesky, Alphonse A.	New Westminster, B.C.	Duke of Connaught High School, New Westm'ter.
Veith, George Selwyn	Montreal, Que.	Private Tuition.
Wiener, Judah	Montreal, Que.	Montreal High School.

SECOND YEAR

NAME	HOME ADDRESS
Adams, Marston Emery	Magog, Que.
Docks, Rupert George	Montreal, Que.
Donnelly, William Thomas	St. John, N.B.
Eidinger, Louis Samuel	Montreal, Que.
Fineberg, Joseph	Montreal, Que.
MacSween, Sydney Alexander	Montreal, Que.
Pesner, Isidor N	Montreal, Que.
Ratner, Banus	Montreal, Que.
Walsh, Arthur L	Notre Dame de Grace, Que.

THIRD YEAR

Edmison, Ralph Williams	Montreal, Que.
Kolber, Moses	Montreal, Que.
Lande, Nathan	Montreal, Que.
Schachter, Samuel	Montreal, Que.
Wisse, William Horatius	Montreal, Que.

FOURTH YEAR

Gold, Benjamin	Montreal, Que.
Moore, Charles H. Pierce	Windsor, Mills Que.
*Moraitis, George	Montreal, Que.
Primrose, Victor S.	Baltimore, Md., U.S.A.
Rooney, Joseph Waldemar	Quebec, Que.
Solomon, Myer	Montreal.

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*Partial. †Double Course.

STUDENTS IN PHARMACY.

Name	Home Address
Adams, Job Leonard	Montreal, Que.
Arbess, Jacob	Montreal, Que.
Bailey, Henry Louis	Montreal, Que.
Baum, Harry Alexander	Montreal, Que.
Bernfeld, William	Montreal, Que.
Bolton, Thomas Hugh	Notre Dame de Grace, Que.
Brooks, Stanley Seymour	St. Peter, Barbados, B.W.I.
Budning, Harry	Montreal, Que.
Cartier, James Felix	Westmount, Que.
Charland, Paul Vincent	Montreal, Que.
Edward, Joseph Hamilton	Sandy Point, St. Kitts, B.W.I.
Girard, Adolph Norbert	Biddeford, Me., U.S.A.
Hayes, Martin	Montreal, Que.
Hertz, Ella	Montreal, Que.
Hillrich, William George	Montreal, Que.
Hoichberg, Moses	Montreal, Que.
Kibrick, James Jacob	Montreal, Que.
Klein, Jack	Montreal, Que.
Leete, Curtis Arthur	Danville, Que.
Lortie, Daniel	Montreal, Que.
Lyons, Robert Henry	Montreal, Que.
Mackie, James Garden	Montreal, Que.
McMichael, James Campbell	Montreal, Que.
Magnan, Charles August	St. Elisabeth of Joliette, Que.
Marston, Albert Edward	Montreal, Que.
Moore, George Edward	Montreal, Que.
Neamtan, Hyman	Montreal, Que.
Ostro, Nathan S	Montreal, Que.
Palmer, Gerald Ecclestone	Montreal, Que.
Pehlemann, Carl Alexander	Montreal, Que.
Rosen Abraham	Montreal, Que.
Silverman, Norman	Montreal, Que.
Simon, Moe	Montreal, Que.
Simpson, Walter John	Montreal, Que.
Singer, William	Montreal, Que.
Terk, Nathan	Montreal, Que.
Tyrrell, Kenneth Walter	Montreal, Que.
Valiquette, Lucien	Montreal, Que.
Wagner, Otto	Montreal, Que.
Weinrauch, Emmanuel L	Montreal, Que.
Wilson, Harold Nichols	Westmount, Que.

FACULTY OF LAW.

FIRST YEAR

NAME	HOME ADDRESS	SCHOOL LAST ATTENDED
*Baker, Effie	Bolton, Que	
Crankshaw, John Edwin	Westmount, Que	Westmount High School.
Dineen, Jos, Daniel Dudley	Montreal, Que	Catholic High School.
Dooner, Richard James	Outremont, Que	Loyola College.
Doucet, Charles Emile	Lourdes, Megantic Co., Que	Levis College.
*Drabkin, Bertha, B.A.	Montreal, Que	Private Tuition.
Gallery, John O'Neill	Montreal, Que	Loyola College.
Hughes, Adella C. Currie, B.A.	Montreal, Que	
McCaffrey, Clarence Francis	Montreal, Que	Catholic High School.
McGillis, Alex. Francis	Westmount, Que	Loyola College.
†Martin, Erle Crutchfield	Dewittville, Que	Ormstown Academy.
Meyerovitch, Philip	Montreal, Que	Montreal High School.
Pender, Gordon Matthew	Windsor Mills, Que	Bishop's College.
Perron, James B.	Montreal, Que	Shortell's Academy.
Philbrick, George Wm	Danville, Que	Bishop's College.
Seguin, André Humbert	Rigaud, Que	College Bourget, Rigaud.
Shvemar, David	Montreal, Que	Montreal High School.
Sigler, Max Isidore, B.A.	Montreal, Que	Montreal High School.
Tolzess, Isidore Louis	Ottawa, Ont	Ottawa Collegiate Inst.
Versailles, Maurice	Montreal, Que	Loyola College.

SECOND YEAR

NAME	HOME ADDRESS
Bowles, William Francis	Lincoln, N.H.
Braidwood, Theodora	Westmount, Que.
Bridgman, Randolph Harwood, B.A.	Westmount, Que.
Cameron, Dakers, B.A.	Montreal, Que.
Champoux, Paul Emile	Montreal, Que.
Cloutier, Clarence I.	Roxton Pond, Que.
Decker, Saul William	Montreal, Que.
Dillon, Thos. Patrick	Montreal, Que.
Martineau, Jean Charles	Westmount, Que.
Masson, Edouard	Montreal, Que.
Schwartz, Bernard, B.A.	Montreal, Que.
*Seymour, Florence Ellen	Montreal, Que.
Singer, Max B.	Sussex, N.B.
Wainwright, Gladys	Montreal, Que.

THIRD YEAR

Ahern, John Gerard	Quebec, Que.
Bernstein, Ben	Montreal, Que.
Hughes, Wilfred Perry, B.A.	Montreal, Que.
King, Hector Henry	Windsor Mills, Que.
Levine, Lyon	Montreal, Que.
Phillips, Lazarus	Montreal, Que.
Ram, Thomas S.	Montreal, Que.
Robinson, Benjamin	Montreal, Que.
Savard, Arthur	Quebec, Que.
Schwartz, Bennie Alfred	Quebec, Que.

*Partial. †Double Course.

FACULTY OF AGRICULTURE.

FIRST YEAR

NAME	HOME ADDRESS
Baldwin, John Leslie	Coaticook, Que.
Brock, Otto Carlyle	Glen Sutton, Que.
Brown, John George	Ste. Anne de Bellevue, Que.
Clarke, Andrew Balfour	Westmount, Que.
Daly, Paul Macintyre	St. John, N.B.
Denison, Simeon Minor	Denison's Mills, Que.
Dowling, Isabel Ernestine	Hemmingford No. 1, Que.
Griffin, Albert Wilfred	Paradise, Montserrat, B.W.I.
Hardie, George Taylor	Westmount, Que.
Hetherington, Samuel Judson	Cody's, N.B.
Lachaine, Osias Wenceslas	Orleans, Ont.
McCarthy, Edward Marmaduke	Montreal, Que.
McClintock, Pearl	St. Andrew's East, Que.
McNaughton, Herbert Redvers	Hemmingford, Que.
McNaughton, John Earl	Hemmingford, Que.
Major, Thomas Grant	Montreal, Que.
Malouf, Adeeb Joseph	Montreal, Que.
Newton, Dorothy Elizabeth	Plaisance, Que.
Paige, Morton Baldwin	Coaticook, Que.
Paige, Waldo Austin	Coaticook, Que.
Parker, James Osmond	Coaticook,, Que.
Richardson, James Keith	Notre Dame de Grace, Que.
Rochon, Gerard Normand	Hull, Que.
Rowe, Arthur Henry	Lennoxville, Que.
Shagoury, Deeb Joseph	Montreal, Que.
Shepherd, Edward Frederick Sisnett	La Guerite, St. Kitts, B.W.I.
Ste. Marie, Louis Theogène	R.R. No. 2, Compton, Que.
Vincent, Roderick	Montreal, Que.
Warson, Cyril James	Ottawa, Ont.
White Charles Marry	River Desert, Que.

SECOND YEAR

Birch, Anthony Home Wyrley	Westmount, Que.
Boily, Joseph Stephane	Roberval, Que.
Buchanan, James Stewart	Westmount, Que.
Burt, Henry Oliver	R.R. No. 2, Melbourne, Que.
Cliche, Louis Phillippe	East Broughton, Que.
Dewey, Sabino Louis	New York City, U.S.A.
Hay, Angus Lockhart	Lachute, Que.
Maw, William Alfred	Ormstown, Que.
Ness, John Earle	Howick, Que.
Pesner, Abraham Noah	Montreal, Que.
Peterson, Archie William	Montreal, Que.
Scanneil, James Wesley	Chelsea, Que.
Singer, Morris	Montreal, Que.
Smith, James Black	New Glasgow, Que.

THIRD YEAR

Barnett, William Horace	Shawville, Que.
Derick, Russel Arthur	Clarenceville, Que.
Henry, Cyril Henneker	Kingston, Jamaica, B.W.I.
Kutzman, Nathaniel	Montreal, Que.

FOURTH YEAR

NAME	HOME ADDRESS
Arnold, Gilbert Ewan	Grenville, Que.
Boulden, Charles Eric	Windsor, N.S.
Dobie, Eric Egerton	Charlottetown, P.E.I.
Kelsall, Arthur	Wilmot, N.S.
Kinsman, Frederic Borden	Lakeville, N.S.
McMahon, Enoch Arthur	Ste. Anne de Bellevue, Que.
Mace, Herbert Seward	Rutland, Vt., U.S.A.
Newton, Margaret	Plaisance, Que.
Reid, Robert Jack Murray	Chateauguay Basin, Que.
Stanford, Pearl Clayton	Dartmouth, N.S.
Taylor, Eldon Main	Little Shemogue, N.B.

STUDENTS IN ATTENDANCE.

SESSION 1917-1918.

	Under-graduates.	Partials.	Total.	
ARTS.				
First Year—Men	61	24	85	
Women	47	14	61	
Second Year—Men	33	11	44	
Women	45	12	57	
Third Year—Men	26	6	32	
Women	38	5	43	
Fourth Year—Men	21	0	21	
Women	24	0	24	
First Year (Commercial Course)			8	
Second Year (Commercial Course)			3	
				378
APPLIED SCIENCE.				
First Year	65	5	70	
Second Year	38	2	40	
Third Year	42	3	45	
Fourth Year	27	0	27	
				182
MEDICINE.				
First Year	88	3	91	
Second Year	66	2	68	
Third Year	63	0	63	
Fourth Year	71	0	71	
Fifth Year	72	0	72	
				365
DEPARTMENT OF DENTISTRY.				
First Year	19	1	20	
Second Year	9	0	9	
Third Year	5	0	5	
Fourth Year	6	0	6	
				40
DEPARTMENT OF PHARMACY.				
For the Diploma of Pharmacy			41	
				41

Law.	Under-graduates.	Partials.	Total.	
First Year	18	2	20	
Second Year	13	1	14	
Third Year	10	0	10	
				44
Agriculture.				
First Year	30	0	30	
Second Year	14	0	14	
Third Year	4	0	4	
Fourth Year	11	0	11	
				59
Department of Music.				
	7	68	75	
				75
				1184
Less number whose names appear in more than one list....				16
Total				1168

UNIVERSITY AND GRADUATES' SOCIETIES.

No Club or Society which has not been approved by the Corporation is entitled to use the name of the University, or of the Royal Victoria College. Applications for such approval, accompanied by a copy of the constitution, should be addressed to the Registrar.

The Students' Council of McGill University.

OFFICERS 1918-19.

President—R. R. Laing, Sci. '19.
Controller—A. F. Byers, B.A.Sc.
Secretary—H. A. Melville.

Executive Council.

A. I. Smith, Arts '19, Representative from Arts.
J. G. Martineau, Law '19, Representative from Law.
H. E. McLellan, Sci. '19, Representative from Science.
G. N. Belyea, Med. '19, Representative from Medicine.
W. F. Kearns, Sci. '19, President McGill Union.
D. Ross, Med. '20, President Rugby Club.
V. P. Heney, Med. '20, President Hockey Club.
D. J. Beach, Sci. '19, President Track Club.
A. Walsh, Dent. '19, President Athletic Association.

The McGill Union.

OFFICERS 1918-19.

President—W. F. Kearns, Sci. '19.
Vice-President—J. P. Gilhooly, Med. '20.
Secretary—H. Moquin, Sci. '19.
Asst. Sec.-Treasurer—H. A. Melville.

House Committee.

(To be elected.)

"McGill Daily."

OFFICERS 1918-19.

President—A. I. Smith, Arts. '19.
Secretary—H. A. Melville.

Undergraduates' Literary and Debating Society.

OFFICERS 1917-18.

Hon. President—Sir William Peterson.
Hon. I. U. D. L. Rep.—Dr. Wm. Caldwell.
I. U. D. L. Rep.—R. J. Clark, B.A.
President—V. S. Green, 18.
Vice-President—D. G. Proudfoot, '19.
Secretary—T. J. C. Heney, '19.
Assistant-Secretary—E. Weibel, '18.
Treasurer—F. C. Dobell, '19.

Arts Undergraduates' Society.

OFFICERS 1918-19.

Hon. President—Dean Moyse.
President—H. A. Aylen.
Vice-President—C. H. Adair.
Treasurer—J. L. Rountree.
(Other Officers to be elected.)

R. V. C. Undergraduates' Society.

OFFICERS 1918-19.

Hon. President—Miss Hurlbatt.
President—Elizabeth Abbott, '19.
Vice-President—Dorothy Mathewson, '20.
Sec.-Treasurer—Janie Spier, '21.
(Presidents from the four years to be elected).

Undergraduates' Society in Applied Science.

OFFICERS 1918-19.

Hon. President—Dean Adams.
President—Hal. C. Lee, '19.
Vice-President—H. V. Karnes, '19.
Secretary—F. J. Cunningham, '20.
Treasurer—C. L. Dewar, '20.
Asst. Treasurer—J. M. Cuddy, '21.

Undergraduates' Society in Law.

OFFICERS 1918-19.

President—Dakers Cameron, '19.
Vice-President—Maurice Versailles, '20.
Sec-Treasurer—Clarence I. Cloutier, '19.

Medical Society.

OFFICERS 1917-18.

Hon. President—Dr. W. W. Chipman.
President—H. A. Wheaton, '19.
Vice-President—E. A. G. Branch, '19.
Treasurer—J. L. Duffy, '20.
Secretary—H. Le R. Dawson, '21.
Case Reporter—F. T. Reid, '19.
Councilmen—Dr. E. W. Archibald, Dr. A. H. Gordon, J. A. McDougall, '20.

Philosophical Society.

(No list of Officers received.)

Chemical Society.

OFFICERS 1918-19.

President—Mr. O. Maass.
Vice-President—Prof. N. N. Evans.
Secretary-Treasurer—Mr. E. G. Young.
Executive Committee—Dr. A. Stansfield and Dr. R. F. Ruttan.

Mining Society.

(No list of Officers received.)

Physical Society.

OFFICERS 1918-19.

President—Dr. H. T. Barnes.
Vice-President—Mr. H. E. Reilley.
Secretary-Treasurer—Miss E. V. Herry.
Executive Committee—The above-named officers, with Dr. King, Prof. Skirrow and Prof. Lloyd.

Historical Club.

OFFICERS 1918-19.

Hon. President—Dr. C. E. Fryer.
President—G. F. Grosjean, Arts '18.
Vice-President—B. N. Holtham, Arts '19.
Treasurer—W. W. Beattie, Med. '20.
Secretary—A. D. MacGibbon, Arts '19.
Committee—Dr. C. E. Fryer, D. G. Proudfoot, Sci. '19.

Electric Club.

OFFICERS 1917-18.

Hon. President—Dr. L. A. Herdt.
Hon. Vice-President—Mr. E. G. Burr.
Secretary—F. L. Code.
Treasurer—T. C. Thompson.
Councillors—W. M. Moore, D. M. Sutherland, G. A. Wallace, D. G. Dunbar, L. J. Jordan, F. L. Cann.

Railway Mechanical Club.

(No list of Officers received.)

Political Economy Club.

President—P. Presner.
Vice-President—B. Joseph.
Secretary—J. K. Mergler.
Treasurer—B. N. Holtham.
R. V. C. Representative—Miss I. L. McDonald.

Cercle Francais.

OFFICERS 1918-19.

Hon. President—Dr. Paul Villard.
President—G. F. Grosjean, Arts '18.
Vice-President—J. K. Mergler, Arts '19.
Secretary—O. Klineberg, Arts '19.
Treasurer—J. D. Phillimore, Arts '20.

Societe Francaise.

OFFICERS 1918-19.

Hon. President—Mlle Gréterin.
President—Gladys M. Banfill.
Vice-President—Eileen M. Wall.
Secretary-Treasurer—Marcelle Reeb.
Reporter—D. Mathewson.
Representatives—Fourth Year, L. Macdonald; Third Year, J. D. Dart; Second Year, Dorothea Aylen.

Delta Sigma Society.

OFFICERS 1918-19.

Hon. President—Miss S. E. Cameron.
Hon. Vice-President—Miss V. Brown.
President—E. Monk.
Vice-President—D. Mawdsley.
Secretary-Treasurer—E. Holland.
Representatives -Fourth Year, S. T. Cameron; Third Year, E. N. Forde; Second Year, K. Godwin.
Poster Representative—H. Nichol.
Reporter—J. Nichol.

Young Men's Christian Association of McGill.

All members of McGill University, and of the affiliated Colleges, are welcomed as Associate Members; the active membership comprises those who are church members, or who subscribe to a simple statement of faith, and approve the objects of the Association.

The home of the Association is Strathcona Hall, which, in addition to affording ample accommodation for the work of the Association as a whole, provides residence for sixty-seven men.

Full particulars regarding the work of the Association are given in the annual Hand Book, and will also be supplied by the General Secretary.

OFFICERS 1918-19.

Board of Alvisers—Dean F. Adams, Chairman; Abner Kingman, Vice-Chairman; W. M. Birks, Treasurer.
Secretaries—R. Dewitt Scott, M. G. Brooks, B.A., Foreign Secretary, G. Brown, Ph.D., Foreign Secretary.
Board—R. Fitzgerald, President; S. Holling, Vice-President; A. S. Noad, Secretary; A. I. Smith, Treasurer.
Committee—H. A. Aylen, W. S. Jamieson, N. E. Peterson, L. Wiggs, L. Ereaux, H. C. Cassidy, W. L. Crewson, E. Christie, C. Boyce, A. MacIntosh, A. Walsh, A. Branch.

Young Women's Christian Association of McGill University.

OFFICERS 1918-19.

Honorary President—Mrs. F. D. Adams.
President—Margaret Macnaughton, '19.
Vice-President—Alice Safford, '20.
Recording Secretary—Edith Barnes, '21.
Corresponding Secretary—Helen Higginson, '21.
Treasurer—Jean Robson, '21.

CONVENERS OF COMMITTEES.

(To be elected next session.)

Royal Victoria College Athletic Association.

OFFICERS 1918-19.

Honorary Adviser—Miss E. M. Cartwright.
Hon. Vice-President—Miss Lichtenstein.
President—G. Craig.
Vice-President—O. Savage.
Secretary-Treasurer—D. Campbell.
Basket-Ball Manager—R. Rogers.
Tennis Manager—E. Abbott.
Hockey Manager—M. Gibbs.
Fancy Skating Manager—S. Cameron.
Sports Manager—L. MacDonald.

Athletic Association.

President—A. Walsh, Dent. '20.
(No list of other Officers received.)

Rugby Football Club.

President—D. Ross, Med. '20.
(No list of other Officers received.)

Swimming Club.

(No list of Officers received.)

Lawn Tennis Club.

OFFICERS 1918-19.

Honorary President—Lieut. George Laing.
President—H. M. Young, Med. '19.
Vice-President—R. L. Kramer, Med. '20.
Secretary-Treasurer—C. S. Hornbeck, Med. '21.

Harriers' Club.

(No list of Officers received.)

Hockey and Skating Club.

(No list of Officers received.)

Track Club.

(No list of Officers received.)

Boxing, Fencing and Wrestling Club.

(Officers not elected during Session 1917-18.)

University Settlement.

OFFICERS 1918-19.

President—Dr. Milton L. Hersey.
Vice-President—Prof. J. A. Dale.
Recording Secretary—Miss M. M. Wherry.
Corresponding Secretary—Miss S. E. Cameron.
Hon. Treasurer—Arthur M. Irvine.
Asst. Treasurer—H. R. Schofield.
Hon. Treasurer, Milk Station—J. Arthur McBride.

Mrs. W. R. Miller
Miss I. Brittain
Miss A. G. Jarvis
Miss E. Longworth
Miss M. Going
A. Huntly Duff
W. B. Somerset
Prof. E. Brown

Finance Committee.

Dr. Milton L. Hersey
T. H. Wardleworth
W. B. Somerset.
H. R. Schofield.
Prof. E. Brown
Arthur M. Irvine
J. Arthur McBride.

Resident Workers.

Miss Bella Hall
Miss E. Dumaresq
Miss M. Smith (Kindergarten)
Miss K. Carr (Milk Station)

Western Club of McGill University.

(Ceased activities until after the war.)

The Club has for its objects the furthering of the interests of McGill in the four Western Provinces and the helping of new students to McGill from these Provinces.

Students from Manitoba, Saskatchewan, Alberta, or British Columbia, coming to McGill for the first time, are requested to communicate with the Secretary of the Club, care The Union, McGill University, Montreal.

Eastern Townships Club.

(No list of Officers received.)

The Maritime Club of McGill University.

The objects of this Club, which was formed four years ago by the amalgamation of the Nova Scotia and New Brunswick and Prince Edward Island clubs, is to promote, in every way possible, the best interests of students coming to McGill from the Maritime Provinces and Newfoundland. Such students are urgently requested to communicate with the Secretary of the Club, who will be glad to render them all assistance in his power.

(No list of Officers received.)

American Club.

OFFICERS 1918-19.

President—H. V. Karnes.
Vice-President—B. F. Rankin.
Secretary—J. B. Pardoe.
Treasurer—K. M. Livingstone.

McGill University Oriental Society.

(No list of Officers received.)

Graduates' Society of McGill University.

OFFICERS 1918-19.

President—J. K. L. Ross, B.Sc.
Vice-Presidents—E. Edwin Howard, K.C.; Mrs. F. P. Shearwood; Dr. W. G. Stewart.
Treasurer—A. R. Howell, B.A.
Secretary—G. T. Hyde, B.Sc., 14 Phillips Sq., Montreal.

Alumnæ Association of McGill University.

OFFICERS 1918-19.

President—Mrs. A. R. Howell, B.A.
1st Vice-President—Miss G. Hunter, B.A.
2nd Vice-President—Miss V. L. Brown, M.A.
3rd Vice-President—Mrs. J. H. Norris, B.A.
4th Vice-President—Miss I. Pearl Leslie, B.A.
Corresponding Secretary—Miss E. P. Henry, B.A.
Asst-Corresponding Secretary—Mrs. Arthur Crumpton, B.A.
Recording Secretary—Miss H. M. Goldstein, M.A.
Asst-Recording Secretary—Miss M. Hay, B.A.
Treasurer—Miss A. Muriel Gillean, B.A.
Assistant-Treasurer—Miss A. W. Wakefield, B.A.

Applied Science Graduates of McGill University.

The object of this organization is to keep the Applied Science Graduates in touch with one another and with their Alma Mater. This is accomplished mainly through the medium of "The Bulletin," published twice a year, and containing, among other things, alphabetical, chronological and geographical lists of the Graduates, Class News and College News.

Honorary Secretary—Nevil Norton Evans, McGill University.

New York Graduates' Society.

(No list of Officers received.)

Ottawa Valley Graduates' Society.

OFFICERS 1918-19.

Honorary President—Sir James Grant, M.D., K.C.M.G.
President—C. H. Brown, B.A., M.D.
Vice-Presidents—J. B. McRae, B.Sc.; Robert Harvie, B.A., Ph.D.; J. J. O'Neill, M.Sc., Ph.D.
Secretary—O. S. Finnie, B.Sc., D.L.S., Norlite Bldg., Ottawa, Ont.
Treasurer—Gordon M. Pitts, M.Sc.
Executive Committee—S. Hadwen, D.V.S.; C. F. Ballantyne, M.D.; F. E. Buck, B.S.A.; Albert O. Hayes, M.Sc., Ph.D.; C. C. Ross, B.Sc.

McGill Alumni Association of Chicago.

OFFICERS 1917-18.

President—Wm. E. Walsh, M.D., C.M., Morris, Illinois.
Vice-President—J. B. Loring, M.D., C.M., Chicago, Illinois.
2nd Vice-President—A. H. Baker, D.V.S., Chicago, Illinois.
Secretary-Treasurer—Norman Kerr, M.D., C.M., Chicago.
Executive Committee:—A. H. Baker, D.V.S.; Wm. L. Copeland, M.D., C.M.; C. H. Long, M.D., C.M.

McGill Graduates' Society of Honan, China.

(No list of Officers received.)

McGill Graduates' Society of Manitoba.

(No list of Officers received.)

McGill Graduates' Society of British Columbia.

(No list of Officers received.)

District of Bedford McGill Graduates' Society.

OFFICERS DURING THE WAR.

Honorary President.— ————————.
President—Dr. N. M. Harris, Knowlton, P.Q.
Vice-President for Missisquoi County—Dr. G. F. L. Fuller.
Vice-President for Brome County—Dr. A. C. Paintin.
Vice-President for Shefford County—Dr. J. A. Corcoran.
Secretary-Treasurer—Rev. Ernest M. Taylor, M.A., Knowlton, P.Q.

McGill University.

SESSIONAL EXAMINATIONS, 1917-1918.

Faculty of Arts.

FOURTH YEAR (GRADUATING CLASS).

PASSED FOR THE DEGREE OF B.A.

In Honours.

(Subjects arranged alphabetically.)

1. In Classics.

Fowler, Lois R..... First Class Honours and Henry Chapman Gold Medal.

2. In Economics and Political Science.

TsoLainos, K. P..... First Class Honours.
Presner, Philip ..... First Class Honours.
Green, Varian S..... On Active Service.

3. In English and History.

Grosjean, Georges F..... First Class Honours and The Houston Exhibition.
Gardner, J. Grace..... Second Class Honours.
MacLennan, Malcolm ..... On Active Service.

4. In English and Philosophy.

Muir, Mary D..... First Class Honours.

5. In History.

Blampin, Wilfrid E..... First Class Honours.

6. In French and History.

Prowse, Grace R..... Second Class Honours.

7. In German and Latin.

Stamm, Bessie G..... First Class Honours.

8. In Modern Languages.

Solomon, Sallie G..... First Class Honours and Governor General's Gold Medal.

PASSED FOR THE DEGREE OF B.SC. (IN ARTS).

In Honours.

1. In Chemistry.

Binmore, Thomas V.....First Class Honours.

PASSED FOR THE DEGREE OF B.A.

IN THE ORDINARY COURSE.

(In order of merit. Students of equal standing are bracketed.)

Class I. None.

Class II. Hay, M. Cameron.
Walker, Florence.
Balfour, Jean.
Brady, William H.
Shulemson, Abraham.
Salomon, Fanny.
Goodwin, Ruth A.
Hurd, Ivadell.
Black, Dora I.
Kuhns, Alma.
Hay, Eleanor C.
Duff, Ella I.
Patterson, Ida M.
Greer, Frances B.

Class III. Diner, Louis.
Tartak, Elias.
Hibbard, Winnifred M.
Duval, Elsie G. M.
Taylor, Kathryn R.

ægrotat. Cherry, Anna.

Unranked. Kelly, Helen L.
Popliger, Mary.

STUDENTS IN ARTS ON ACTIVE SERVICE QUALIFIED TO OBTAIN THE DEGEE OF B.A.

Cohen, Horace R.
Green, Varian S.
Hetherington, Cecil H.
MacLennan, Malcolm.
Ross, Douglas W.
Scott, Cecil O.

DOUBLE COURSE STUDENTS IN ARTS AND MEDICINE QUALIFIED TO OBTAIN THE DEGREE OF B.A. ON COMPLETION OF THE SECOND YEAR IN MEDICINE.

Bernstein, Felix.
Copeland, John G.

Dawson, Howard L.
Dowdall, Geoffrey F.
Eliasoph, Benjamin.
Heinbecker, Peter.
Lande, Joseph.
Strean, George.
Usher, Saul J.

DOUBLE COURSE STUDENTS IN ARTS AND APPLIED SCIENCE QUALIFIED TO OBTAIN THE DEGREE OF B.A.

Henry, Leslie S.

THIRD YEAR.

HONOURS.

B.A. COURSE.

(Subjects arranged alphabetically.)

1. In Chemistry.

Graham, Elsie ..... First Class Honours.
Dougall, Dorothy ..... Second Class Honours.
Booker, Hanford K..... Second Class Honours.

2. In Economics and Political Science.

Levy, John ..... First Class Honours and First Mackenzie Exhibition.
Macdonald, I. Louise..... First Class Honours and Second MacKenzie Exhibition.
Holtham, Bartley N..... Second Class Honours.
Joseph, Bernard ..... Second Class Honours.
Aylen, Henry A..... Second Class Honours.
Ritchie, John R..... Third Class Honours.
Smith, Arthur I..... Third Class Honours.

3. In English and History.

Hague, Helen ..... First Class Honours.
Cameron, Sarah S..... First Class Honours.
Craig, Gwyneth ..... Second Class Honours.
Morgan, Nora S. F..... Second Class Honours.
Grindley, Fannie M..... Second Class Honours.

4. In English and French.

Abbott, Elizabeth E..... First Class Honours.

5. In English and Greek.

Noad, Algy S..... First Class Honours and The Dr. Barclay Exhibition in Classics.

6. In English and Latin.

Macdonald, Brenda } equal..... Second Class Honours.
Basnar, Florence E }

7. In Modern Languages.

Monk, Elizabeth C..... First Class Honours.
Mergler, Joseph K..... First Class Honours.

8. In Philosophy.

Klineberg, Otto ..... First Class Honours.

PASSED THE THIRD YEAR EXAMINATIONS.

1. For Course Leading to B.A.

(Arranged in alphabetical order.)

Abbott, Aylen, Baker, Banfill, Basnar, Booker, Boyd, Cameron, Craig, Cruikshank, Dougall, Giles (s), Graham, Grier, Grindley, Hague, Holtham, Joseph, Klineberg, Levy, Lewis, Lindsay (s), Livingstone (s) Macdonald (B.), Macdonald (I. L.), McGregor, Macnaughton, McRae, Mergler, Mitchell, Monk, Morgan, Noad, Paterson-Smyth, Reid, Ritchie, Rogers, Salomon, Smart, Smith, Swindlehurst, Wright, Young, Younger (s).

2. Double Course in Arts and Applied Science (B.A., B.Sc.).

Brandes (s).

3. Double Course in Arts and Medicine (B.A., M.D.).

(On completion of the First Year in Medicine.)

Davis, Goldwater, Golt, Lipsey, Usher (B. D.).

4. For Course Leading to B.Sc.

Gibbs, Maclennan.

5. Double Course in Arts (B.Sc.) and Medicine (B.Sc., M.D.).

(On completion of the First Year in Medicine.)

Fitzgerald, Mills, Rothschild.

(s) Supplemental in one subject.

SECOND YEAR.

PASSED THE SECOND YEAR EXAMINATIONS.

1. Course Leading to B.A.

Class I. None.

Class II. Evans.
Ewing.
Hill.
Roston..
Mawdsley.
Moule.
Rorke and Somerville, equal.
Nichol (J.).
Moody.
Freedman (L. K.) and Novick, equal.
Forde (E. N.).
Imrie.
Mackinnon (F. J.).
Goddard.

Class III. Davidson.
Knowlton and Petersen (N. E.), equal.
DiFlorio and Scott, equal.
England.
Popliger.
Dart and Henry, equal.
McDougall (s).
O'Brien and Tarshis (s), equal.
Wilson.
Savage.
Olding.
Duncan (s).
Ford (K. M.).
Borden (s).
Safford (s).
Martin (s).
McMillan (M.) (s).

2. Course Leading to B.Sc.

(a) HONOURS.

In Chemistry.

Shaw, Thomas P. G.....First Class Honours.

(b) ORDINARY COURSE (B.SC.).

Class I. None.

Class II. None.

Class III. Charlton.
Galley (s).

(s) Supplemental in one subject.

3. Double Course B.Sc., M.D.

Class I. Freedman (N. B.).

Class II. Petersen (J. N.).
Ereaux.
Rubin.

Class III. None.

4. For the Diploma of Commerce.

Kilgour, Charles Willard.....On Active Service.
McLellan, Andrew Gordon.....On Active Service.
Parkhill, Roy Hamilton.....On Active Service.

FIRST YEAR.

PRIZES.

Holland, Ethelwyn J.....Annie McIntosh Prize.

PASSED THE FIRST YEAR EXAMINATIONS.

1. Course Leading to B.A.

Class I. Holland.
Franklin (G.).
Craig.

Class II. Barnes (E. L.) and Schleifstein, equal.
Barnes (D. S.).
Shapira.
Spier.
McPherson and Rowat, equal.
Godwin.
Mills
Snyder.
Breitman.
Garrow.
McIntosh (C. A.) (s).
Louis (G.).
Sperber.
Sharples.

Class III. Cockfield (s).
Shulman.
Harvey.
Husk.
Campbell.
Thornton (s).
Davidson (s).
Curtis.
Cameron (K. M.).
Silverman (s).
Ross (H. T.) (s).
Reid (H. E.) (s).

(s) Supplemental in one subject.

Lewis (E.) (s).
Hooper (s).
Franklin (M. H.) (s).
Fineberg.
Ford (C.) (s).
Foster (s).
Gillespie (s).
Willson (s).
McEwen (s).
MacIntosh (H.) (s).

On Active Service.

Bourgoin.
Hodgson.
Hébert.

2. Course Leading to B.Sc.

Class I. Mirsky.

Class II. Freedman (J.).

Class III. Rabinovitch (s).
Kay (s).

On Active Service.

Armstrong.

3. Course Leading to the Diploma of Commerce.

Class I. Badian.

Class II. Levitt.
MacDonald.

Class III. Glickman (s).

STANDING IN THE SEVERAL SUBJECTS.

(Arranged alphabetically in order of Departments.)

DEPARTMENT OF BOTANY.

Course 2.

Class I. McDougall.

Class II. Forde, E. N.
Mathewson.

Class III. Smith, C.

Course 5.

Class I. Graham.
Paterson-Smyth.

Class II. Goodwin.
Balfour.

Class III. None.

(s) Supplemental in one subject.

Course 7.

Class I. None.

Class II. Maclennan.

Class III. None.

Course 7 (Advanced).

Class I. Anderson (Mrs. G. E.).

Class II. None.

Class III. None.

DEPARTMENT OF CHEMISTRY.

Course 1 (B.A.).

Class I.
Rorke.
Rhodes.
Roston.
Moule.
Hill.
Davidson.
Goddard.

Class II.
Olding.
Wright.
Popliger.
Ford (K. M.).
Imrie
Mackinnon (F.).

Class III.
Ford (R. H.).
Savage.
Henry.
Wilson.
Borden.
Sangster.
O'Brien.
Younger.
Magonet.
Martin.

Course 1 (B.Sc.).

Class I.
Mirsky.
Eager.

Class II.
Freedman.
Kay.
McCarthy.
Rabinovitch and Irwin, equal.

Class III. Duval.

Course 2.

Class I. McGlaughlin.
Shaw.
Fitzgerald.

Class II. Rothschild.
Mills.
Graham.

Class III. Dougall.
Hemming.
Galley.
Booker.
Maclennan.
Bussière.
Charlton and Duff, equal.

Course 3 (a).

Class I. Graham.
McGlaughlin.
Petersen (J. N.).
Shaw.
Rubin.
Freedman.
Ereaux and Dougall and Gibbs, equal.

Class II. Charlton.
Booker.
Phillips.
Galley.
Rabinovitch.

Class III. Segal.
Hershon.

Course 3 (a) Advanced.

Class I. McGlaughlin.
Shaw.

Class II. None.

Class III. None.

Course 3 (b).

Class I. Freedman.
Rubin.

Class II. Graham.
Petersen (J. N.).
Gibbs.
Dougall and Booker, equal.
Charlton and Ereaux and Galley, equal.

Class III. Segal and Hershon and Rabinovitch, equal.

Course 4.

Class I. Fitzgerald and Mills, equal.
Graham and Rothschild, equal.

Class II. Charlton and Booker, equal.
McGlaughlin and Shaw, equal.
Dougall.

Class III. Maclennan.
Galley.

Course 9.

Class I. None.

Class II. Graham.
Gibbs.

Class III. None.

DEPARTMENT OF CLASSICS.

Greek: Course 1.

Class I. None.

Class II. None.

Class III. Curtis.
Mader.
Cousens.
Morrison.

Greek: Course 3.

Class I. Holland.

Class II. Petersen (N. E.).

Class III. DiFlorio.
Adair.

Greek: Course 5.

Class I. Noad.
Fowler.

Class II. None.

Class III. None.

Greek: Course 7.

Class I. Noad.

Class II. Fowler.

Class III. None.

DEPARTMENT OF CLASSICS.

Latin: Course 1.

Class I. Craig.
Holland.
Franklin (G.).
Spier.
Barnes (D.) and Cockfield, equal.
Shapira.
Rowat.

Class II. McPherson.
Barnes (E.).
Mills.
Hooper.
Louis and Schleifstein, equal.
Garrow and Ross, equal.
Breitman.
Snyder.
Deery.
Sharples.
Davidson and Macdiarmid, equal.

Class III. McIntosh (C.) and Shulman and Thornton, equal.
Godwin.
Ford and Husk and Silverman, equal.
Campbell and Robertson, equal.
Harvey and Lewis, equal.
Cameron and Willson, equal.
MacIntosh (H.) and Sperber, equal.
Franklin (M.).
Medbury.
Reeb and Robson and VanBuren, equal.
Fitzsimons and Reford, equal.
Borden and Gillespie and Reid (H.) and Reid (R.), equal.
Franklin (B.) and Phillimore, equal.
Berger and Echenberg and Fineberg and Johnson, equal.

Latin: Course 2.

Class I. None.

Class II. Evans.
Ewing and Imrie and Wall, equal.
Dart.
Wiseman and Rorke, equal.
Laing and Moody and Moule, equal.
Knowlton and Mackinnon (F. J.), equal.

Class III. Roston.
Freedman and Scott, equal.
McClure and Hill, equal.
Popliger and Somerville and Goddard, equal.
Nichol (J.).
Davidson and Forde (E. N.) and Meyer, equal.
Mawdsley.

Milligan.
Wilson.
Duncan and Flanagan, equal.
Greaves and Henry, equal.
Olding.
Nichol (H. R. H.).
Novick.
McKinnon (J. D.) and Tarshis, equal.
Martin and Joseph and Ford (K. M.) and Reid and Savage, equal.

Latin: Course 3.

Class I. Stamm.
Fowler.
Wright.

Class II. Macdonald (B.).
Basnar.

Class III. None.

Latin: Course 5.

Class I. Stamm.
Fowler.

Class II. Basnar.
Macdonald (B.).

Class III. None.

Latin: Course 7.

Class I. Craig.

Class II. Cockfield.

Class III. None.

DEPARTMENT OF ECONOMICS AND POLITICAL SCIENCE.

Course 1.

Class I. Mawdsley.
Goodwin.
Roston and McGregor and Paterson-Smyth, equal.
Class II. Freedman (L. K.).
Ewing.
Petersen (N. E.) and Raphael, equal.
Evans.
Wiseman and Scott, equal.
Knowlton and Robertson, equal.
DiFlorio.
Center.

Class III. Henry and Milligan and Nichol (J.) and Brodie, equal.
Duncan and Wilson, equal.
Borland.
Nichol (H. R. H.).
Novick and McDougall, equal.
Martin.
Smith (C. B.) and Safford, equal.
Bourke and Sangster, equal.
Forde (E. N.).
Coveler.
Vineberg.
Adair.
O'Brien and Murray, equal.

Course 2.

Class I. Klineberg.
Macdonald (I. L.).

Class II. Levy.
Rogers.
Holtham.
Aylen.
Diner.

Class III. Joseph.
Smith.
Tartak.
Smart.
Ritchie.
Boyd.
Baker.
Gibbs and MacGibbon, equal.

Course 3.

Class I. Levy.
Macdonald.
Holtham.
Swindlehurst.

Class II. Tartak and Balfour, equal.
Ritchie and Reid, equal.
Rogers.
Taylor.
Joseph.
Smart.

Class III. Hurd.
Hay (E. C.) and Kuhns, equal.
Black.
Smith (A. I.).
Lindsay.
Aylen.
Giles.

Course 6.

Class I. Levy.
Macdonald.
Presner and TsoLainos, equal.

Class II. Smith.
Holtham.
Shulemson.
Joseph.
Aylen.
Ritchie.

Class III. None.

Course 7.

Class I. Levy.
Macdonald.
Presner and TsoLainos, equal.

Class II. Patterson.
Joseph.
Aylen.

Class III. Holtham.
Ritchie.
Smith (A. I.).

Course 10.

Class I. TsoLainos.
Blampin and Diner, equal.
Presner and Patterson, equal.

Class II. Shulemson.
Prowse.

Class III. None.

Course 11.

Class I. TsoLainos.
Presner.

Class II. Shulemson.

Class III. Diner.

Course 12.

Class I. Presner.

Class II. Shulemson and TsoLainos, equal.

Class III. None.

DEPARTMENT OF EDUCATION.

Course 1.

Class I. Muir.
Black.
Balfour.
Mitchell.
Young and Klineberg, equal.

Class II. Duval.
Blampin and Hay (M. C.), equal.
Greer.
Levy and Hay (E. C.), equal.
Wright.
Gardner.

Class III. Patterson.
Livingstone.
Taylor and Swindlehurst, equal.
Reid.
Salomon.

Course 2.

Class I. Basnar.
Hurd and Price, equal.
Solomon.

Class II. Mergler.
Banfill.
Pickel.
Macnaughton.

Class III. Lewis.
McRae.

DEPARTMENT OF ENGLISH.

Course 1.

Class I. Sperber.
Newham.
Harvey and Marsh, equal.
Berger and Craig and Servage, equal.

Class II. Curtis.
Barnes (E. L.) and VanBuren, equal.
Kay and Barnes (D. S.) and Spier, equal.
Holland and Thornton and McLauchlan, equal.
Phillimore.
Schleifstein and Mirsky and Sifton, equal.
Shulman and Franklin (G.), equal.
McPherson.
Shapira and Willson and Lewis and Medbury, equal.
Cockfield and Kellert and Garrow, equal.

Class III. Hooper and Feldstein and Louis and Mills and Bishop and Millen, equal.
Pratt and Fitzsimons and Reeb and Snyder and Seeley and Brierley, equal.
Cousens and Overing and Wagner and Davidson and Foster and Panish, equal.
Deery and Morrison and Reford, equal.
Ross and Rowat and Boyce and Macdiarmid and Robson. and Sharples, equal.
Borden and Ford and Neederhoffer and McCaig, equal.
Godwin and McClure and Bolger, equal.
Robertson and Freedman and Campbell and MacIntosh (H.) and Simon, equal.
Franklin (M. H.) and Breitman and Mansfield and Brodie and Lecker and Dyke, equal.
Franklin (B.) and Husk, equal.
Rountree and Reid (H. E.) and Cameron and Gillespie, equal.
Rabinovitch and Silverman, equal.
McEwen and Fieldman, equal.
Echenberg and Fineberg and Gray and Reid (R.), equal.
Mader and Scane, equal.

Course 2.

Class I. Sperber.
Schleifstein.
Sharples.
Craig and Holland and Robertson, equal.

Class II. Franklin (G.).
Breitman.
Cockfield.
McIntosh (C. A.) and Shapira and Spier, equal.
Godwin.
Barnes (E.).
Boyce and Mirsky, equal.
Harvey and Rabinovitch and Snyder, equal.
Barnes (D.) and Brierley and Cameron and Davidson and Garrow and McLauchlan and Mader and Rowat and Shulman, equal.

Class III. Eager and MacIntosh (H.), equal.
Macdiarmid.
Medbury and Reford and Reid (R.), equal.
Feldstein and Overing, equal.
Bishop and McPherson and Ross, equal.
Campbell and Louis (G.) and Sifton, equal.
Kay and Mills and Phillimore and VanBuren, equal.
Fitzsimons and Foster and Kellert and Simon, equal.
Dyke and Newnham, equal.
Servage and Silverman and Willson, equal.
Curtis.
Brodie and Ford and McEwen and Reid (H. E.), equal.
Husk and Robson and Thornton, equal.
Fineberg and Freedman and Wagner, equal.

Lewis (E.) and Panish and Teitlebaum, equal.
Gillespie and Higginson, equal.
Deery and Franklin (M.) and Gray and Hooper and Irwin and McCaig and Seeley, equal.

Course 3.

Class I. Somerville and Mawdsley, equal.
Adair.
Mann and Nichol (J.), equal.

Class II. Wiseman and Ewing and Forde (E. N.), equal.
Raphael and Moody and Roston, equal.
Robertson.
O'Brien and Flanagan and Novick, equal.
Taylor and Meyer, equal.
Freedman (N. B.).
Petersen (J. N.).
Evans and McDougall and Moule and Nichol (H. R. H.), equal.
Mathewson and Dewey and Wall, equal.

Class III. Wilson.
Davidson and Goodman, equal.
Ereaux and Imrie and Tarshis and Ditchfield, equal.
Freedman (L. K.) and Smith and Center and Scott, equal.
Knowlton and Milligan and Sangster, equal.
DiFlorio and Mackinnon (F. J.), equal.
Popliger and Borden and Reid and Safford, equal.
Duncan and Dart and Hill and Rorke, equal.
Coveler and Hershon and Henry and Savage and Charlton, equal.
Galley and Goddard, equal.
McMillan (M.).
Ford (R. H.) and Vineberg and McMillan (H.) and Borland, equal.
Murray and Shaw, equal.
Rabinovitch and Olding, equal.
Rubin.
Petersen (N. E.) and McKinnon (J. D.) and Laing and Ford (K. M.), equal.

Course 4.

Class I. Mawdsley.
Meyer.
Evans and Nichol (J.), equal.

Class II. Novick.
Flanagan.
Nichol (H. R. H.) and Raphael, equal.
Wiseman.
Ewing and Forde (E.), equal.
Somerville.
Mann and Moody, equal.
Freedman and Imrie, equal.
Taylor.
McDougall and Sangster, equal.
Dewey and Mackinnon (F. J.), equal.
Goodman and Safford and Scott and Tarshis, equal.

Class III. DiFlorio.
Adair.
McMillan (M.).
Laing.
Davidson and Ditchfield and Savage, equal.
Borden.
Beach and Dart and McMillan (H.) and Wilson, equal.
Center.
Petersen (N. E.) and Popliger, equal.
Frank and Milligan, equal.
Henry.
Olding.
Borland and Bourke and Reid, equal.
McClure and McKinnon (J. D.) and Mathewson, equal.
Coveler and Ford (K.) and Greaves, equal.

Course 5.

Class I. Hague.
Abbott.
Gardner.
Paterson-Smyth.
Grosjean.

Class II. Basnar and Banfill and Mitchell, equal.
Cameron.
Young.
Craig.
Grindley.
Duval.
Morgan.
Macdonald (B.) and Macnaughton and Swindlehurst, equal.

Class III. Cruikshank.
Lindsay.
Lewis.

Course 7.

Class I. Paterson-Smyth.
Muir.
Noad and Mitchell, equal.
Reid and Rogers, equal.
Lewis.
Grier.
Gray.
Black.
Tartak.

Class II. Duval.
Goodwin and Hurd, equal.
Brady and Greer, equal.
Kuhns.
Swindlehurst and Young, equal.

Class III. MacGibbon.
McRae.

Course 9.

Class I. Walker.
Hague.
Hay (M. C.).

Class II. Cameron.
Basnar.
Pickel.
Craig.
Morgan and Swindlehurst, equal.
Young.
Grindley.
Brady and Lewis and Mitchell, equal.

Class III. Reid.
McLean.
Cruikshank.
Grier and Lindsay, equal.
Macnaughton.
Hibbard.
McRae and Younger, equal.

Course 10.

Class I. Hague.
Brady.
Cameron.
Greer (F.).
Craig.
Grier (J.).

Class II. Morgan.
Grindley and Livingstone, equal.
Hibbard.

Class III. None.

Course 12.

Class I. Walker.
Hay (M. C.) and Hurd, equal.

Class II. Black.
Gardner.
Goodwin.
Greer.
Kuhns.
Gray.

Class III. None.

Course 13.

Class I. Macdonald.
Abbott.
Noad.

Class II. Basnar.
Banfill.

Class III. None.

Course 18.

Class I. Grosjean.
Muir.
Paterson-Smyth.
Walker.
Abbott.
Banfill and Noad, equal.

Class II. Tartak.
Cruikshank and Macnaughton, equal.
Gardner and Macdonald, equal.
Kuhns.
Hurd.
Gray.

Class III. None.

Course 21.

Class I. Grosjean.
Muir.
Hague.
Pickel.
Cherry.

Class II. Abbott.
Paterson-Smyth.
Cameron.
Lindsay and Noad and Walker, equal.
Banfill.
Hurd and Salomon (F.), equal.
Craig and Macdonald and Morgan, equal.
Black.
Basnar and Grindley, equal.
Patterson.
Goodwin and Reid, equal.

Class III. Duval.
Greer.
Younger.

Course 22.

Class I. Blampin.
Muir.
Walker.
Hay (M. C.).
Gardner.
Grosjean.

Class II. Hay (E. C.).
Black.

Class III. None.

DEPARTMENT OF GEOLOGY.

Course 1.

Class I. Rogers.
McGregor and Mitchell, equal.
Kuhns.
Young.
Swindlehurst and Anderson, equal.
Salomon (R.) and Hibbard, equal.
Livingstone and Cruikshank, equal.

Class II. Goodman.
McRae.
Lewis.
MacGibbon.
Smart and Brady, equal.
Shulemson.
Macnaughton.

Class III. Tartak.
Giles.
Boyd and Gray, equal.
Baker.

Course 2.

Class I. Balfour.
Walker.
Goodwin.
Patterson.

Class II. Hay (E. C.).
Greer.
Hurd.
Salomon (F.).

Class III. Taylor.

Passed. Popliger.

Course 5.

Class I. None.

Class II. Gibbs.
McGlaughlin.

Class III. Birks and Maclaren, equal.

Course 6.

Class I. None.

Class II. Gibbs.

Class III. Maclaren.

DEPARTMENT OF HISTORY.

Course 1.

Class I. Barnes (E. L.).
Godwin.
Barnes (D. S.).
Holland.
Garrow.
Cockfield.
Craig.
McIntosh (C. A.) and Sharples, equal.
Franklin (G.) and Levitt and Spier and Shapira, equal.

Class II. Overing and Sperber, equal.
Davidson.
Reid (H. E.) and Schleifstein, equal.
Robertson.
Badian and Brierley, equal.
Rowat and Shulman, equal.
Breitman and Cameron and Ross, equal.
Mader and Silverman, equal.
Hooper and Macdiarmid and Mills, equal.
Curtis and Reid (R. V.) and Snyder, equal.
Pratt.

Class III. Berger and Campbell, equal.
Boyce and Gillespie, equal.
Medbury and Phillimore, equal.
Bishop and Harvey and Lewis (E. E.), equal.
Husk and McEwen, equal.
Ford and Higginson and McPherson and VanBuren, equal.
Borden and Glickman, equal.
Deery.
Echenberg and MacDonald, equal.
Brodie and MacIntosh (H.), equal.
Bockar and Morrison and Neederhoffer and Feldstein and Willson, equal.
Fineberg and Fitzsimons and McCaig and Teitlebaum and Reford, equal.
McClure.
Cousens.
Foster and Louis (G.), equal.
Pyke.
Kellert and Mansfield, equal.
Franklin (M. H.).
Ein (W.) and Lecker, equal.

Course 2.

Class I. Freedman (L. K.).
Petersen (N. E.).
Mawdsley and Roston, equal.
Adair.
Evans.
Ewing.
Duncan.

Class II. Novick.
Milligan and Nichol (J.) and Knowlton, equal.
Hibbard.
DiFlorio.
Bourke.
Safford and O'Brien, equal.
McDougall.
Dewey and Forde (E. N.) and Smith, equal.
McKinnon (J. D.).
Murray.
Ditchfield.
Nichol (H.).
Wilson.
Frank.

Class III. Scott.
Sangster and McClure, equal.
Savage and Martin, equal.
McMillan (H.) and McMillan (M.), equal.
Reid.
Ford (R. H.).
Vineberg.

Course 3.

Class I. McGregor.
Craig and Hague, equal.

Class II. Cameron.
Morgan.
Grindley.

Class III. Livingstone.
Taylor.
Giles.
Younger.

Course 5.

Class I. Blampin.
Pickle.
Hay (M. C.).
Cameron and Hague, equal.

Class II. Balfour and Gardner, equal.
Patterson.
Morgan.
Grindley.
Craig.
Hay (E. C.).

Class III. Rogers.
Taylor.

Course 7.

Class I. Hague.
Craig.
McGregor.
Grosjean.
Cameron.
Hay and Morgan, equal.

Class II. Brady.
Grindley.
Macnaughton.
Salomon (F.).
Hibbard and Cruikshank, equal.

Class III. Kuhns.
Brandes and Salomon (R.), equal.
Taylor.
Gray.
McRae.
Lewis.

Course 8.

Class I. Blampin and Grosjean, equal.

Class II. Prowse.
Gardner.

Class III. None.

Course 9.

Class I. Blampin.
Grosjean.
Gardner.

Class II. Aylen.
Holtham.
Balfour and Patterson, equal.
Smith and Diner, equal.
Prowse.
Joseph.
Ritchie and Hay, equal.

Class III. None.

Course 10.

Class I. TsoLainos.
Blampin.
Gardner (D.).

Class II. None.

Class III. None.

DEPARTMENT OF MATHEMATICS.

Course 1: Algebra.

Class I. Levitt.
Franklin (G.).
Craig.
Badian and Holland, equal.
McIntosh (C. A.).
Schleifstein.

Class II. Curtis and Spier and Garrow, equal.
Franklin (B.).
MacDonald and Godwin, equal.
Husk and Mills, equal.
Breitman and Campbell and Higginson, equal.
Sperber.
Sifton.
Eager and Ross, equal.
Glickman and Mader and Barnes (D. S.) and Louis and Hemming, equal.

Class III. Rowat and Cameron, equal.
Deery.
Barnard.
Borden and Reid (H. E.), equal.
Gillespie and Harvey and Hill and Sharples, equal.
Shulman.
Freedman and Fineberg and Reid (R.), equal.
Feldstein and Willson, equal.
McEwen and Savage and Bockar and Cohen and Wagner and Cockfield, equal.
Robson.
Mansfield and Irwin, equal.
Phillimore.
Barrett and Fieldman and Duval, equal.
Franklin (M. H.) and Neederhoffer, equal.

Course 1: Geometry.

Class I. McIntosh (C. A.) and Badian and Barnes (D. S.) and Barnes (E. L.) and Snyder, equal.
Breitman.
Schleifstein.
Garrow.
Franklin (G.).
Godwin.
Levitt.
Eager and McPherson, equal.
Mirsky and Holland, equal.
Craig and Fares, equal.
Freedman and Louis, equal.
Reid (H. E.).

Class II. Mader and Boyce, equal.
Echenberg.
Pratt and Rowat, equal.
Campbell.
MacDonald and Mills and Reeb, equal.
Curtis and Magonet, equal.
Sifton and Sharples, equal.
Glickman and Robertson, equal.
Foster.
Hooper and Barrett and Ford (C.), equal.

Class III. Husk and McClure, equal.
Savage.
Johnson and Shulman, equal.
Brodie.

Cameron and Mansfield and Irwin, equal.
Wagner and Reid (R.), equal.
Rabinovitch and Lax and Rountree, equal.
Hill.
Cockfield and Lewis, equal.
Ross and McCarthy, equal.
Higginson and Harvey, equal.
Brown and Bockar and Deery, equal.
Franklin (M. H.) and Reford, equal.
Borden and VanBuren and Davidson and Gillespie, equal.
Fineberg and Layton and Barnard and Simon, equal.
McEwen and Teitelbaum, equal.
Cohen and Sperber and Shapiro and Macdiarmid and Gray, equal.

Passed special examination: Spier and McLagan.

Course 1: Trigonometry.

Class I. Franklin (G.).
Craig.
McIntosh (C. A.).
Holland.
Breitman.
Garrow.
Schleifstein.

Class II. Ross.
Rowat.
Reid (H. E.) and Barnes (D. S.) and Mills, equal.
Wagner.
Hemming.
Husk and Barnard, equal.
Higginson.
Curtis and Eager and Freedman, equal.
Feldstein.
Spier.

Class III. McEwen.
Rabinovitch and Sharples, equal.
Borden.
Reford.
Ein (W.) and Godwin, equal.
Cameron and Campbell, equal.
Deery.
Echenberg and Mader, equal.
Davidson and Sperber, equal.
Boyce.
Fineberg and VanBuren, equal.
Shulman and Savage, equal.
Berger.
Rothschild and Ein (M.), equal.
Lax and Lewis, equal.

Course 2: Geometry. Advanced.

Class I. Barnes (E. L.).
Shapira.
Mirsky.

Class II. Snyder.
McPherson and Thornton, equal.
Dobson.

Class III. Foster and Magonet, equal.

Course 2: Algebra, Trigonometry, Theory of Equations.

Class I. Barnes (E. L.).
Mirsky.

Class II. Shapira.
McPherson.
Simon.
Dobson.

Class III. Snyder.
Thornton.
Magonet.
Foster.

Course 3: Algebra.

Class I. Hill.
Rorke.

Class II. Goddard.
Booker.
Dart.

Class III. Galley.
Maclaren.

Course 3: Geometry.

Class I. Hill.

Class II. Goddard.
Dart.

Class III. Rorke.
Galley.
Laing and Maclaren, equal.

Course 4: Anal. Conics.

Class I. None.

Class II. Wright.

Class III. Charlton.
Booker.
Dougall.

Course 5: Infinit. Calculus.

Class I. Dougall.

Class II. Wright.

Class III. Charlton and Robertson and Booker, equal.

Course 5.

Class I. Wright and Robertson, equal.

Class II. None.

Class III. Laing and Greaves, equal.

Course 6.

Class I. None.

Class II. Wright.
Robertson.

Class III. None.

DEPARTMENT OF MODERN LANGUAGES.

French: Course 1.

Class I. Spier.
Louis.
Cockfield.

Class II. McPherson.
Aylen and Rowat, equal.
Franklin (M. H.) and Savage, equal.
Harvey.
Shulman.
Godwin and Sharples and Silverman and Thornton, equal.
Barnard.
Snyder and Feldstein, equal.

Class III. Robertson and Shapira, equal.
Davidson and Breitman and Echenberg and Reford, equal.
Barnes (D.).
Husk and Mills and Hooper and Overing, equal.
Campbell.
Brodie and Cameron and Ford, equal.
Fitzsimons and Foster, equal.
Fineberg and Johnson and McIntosh (C. A.), equal.
Garrow and Lewis and McClure, equal.
Barnes (E.) and Phillimore, equal.
Lecker and Fieldman and McEwen, equal.
Higginson.
MacIntosh (H.).
Borden and Boyce and Teitlebaum, equal.
Franklin (B.) and Rountree, equal.
Gillespie and Curtis, equal.

French: Course 1. Advanced.

Class I. Reeb.

Class II. Sperber.
Franklin (G.) and Schleifstein, equal.
Bolger.

Class III. Berger.
Wagner.

French: *Course 2.*

Class I. Freedman and Hemming, equal.

Class II. Rabinovitch.
Duval and Kay, equal.
Mirsky.
Eager.

Class III. Sifton.
Irwin.

French: *Course 3.*

Class I. None.

Glass II. Ewing and Moule, equal.
Mackinnon (F. J.).
Freedman (L. K.).
DiFlorio.
Rorke and Somerville, equal.
Borden and Meyer, equal.

Class III. Moody and Popliger, equal.
Imrie.
England and Knowlton, equal.
Coveler.
Scott.
Mawdsley.
O'Brien.
Davidson and Ditchfield, equal.
Duncan.
Olding.
Martin.
Dart and Wilson, equal.
Ford (K. M.) and McMillan (H.) and Safford and Greaves, equal.
Flanagan and McClure, equal.
McMillan (M.) and Ford (R. H.), equal.

French: *Course 3. Advanced.*

Class I. Novick.
Hill.

Class II. Wall.
Wiseman.
Roston.

Class III. Nichol (J.) and Frank, equal.
Mathewson.
Nichol (H.).

French: *Course 4.*

Class I. None.

Class II. None.

Class III. Salls.

French: *Course 6.*

Class I. Solomon.
Monk.
Mergler.
Abbott.
Young and Salomon (F.), equal.
Prowse.

Class II. Duval.
Banfill and Macdonald and Mitchell, equal.
Walker.
McGregor.

Class III. Salomon (R.).
Macnaughton.
Lewis.
Smart.
Diner.
Cruikshank.

French: *Course 7.*

Class I. Abbott.
Monk and Solomon, equal.

Class II. None.

Class III. Mergler.
Prowse.

French: *Course 8.*

Class I. Solomon and Monk, equal.
Mergler.

Class II. Prowse and Abbott, equal.
Banfill.

Class III. None.

French: *Course 10.*

Class I. Solomon.
Monk.
Prowse and Abbott, equal.

Class II. Mergler.

Class III. Banfill.

German: *Course 1a.*

Class I. Franklin (G.).

Class II. Harvey.
McIntosh (C. A.).

Class III. Knowlton.
Breitman.
McKinnon (J. D.).
Fitzsimons.
Ein (W.) and Teitelbaum, equal.

German: *Course 1b.*

Class I. Mirsky.

Class II. Rabinovitch.
Duval.

Class III. Freedman.
Donald.
Hemming.
Ein (W.) and Kay, equal.

German: *Course 2.*

Class I. Craig.

Class II. Louis.
Silverman.

German: *Course 3.*

Class I. Wiseman.
James.

Class II. Blair.
Coveler.

Class III. Magonet.
Shaw.
Charlton.

German: *Course 4.*

Class I. Meyer.

Class II. Tarshis.
England.
Wall.

Class III. Wigdor.
Caplan.

German: *Course 6.*

Class I. Stamm.
Solomon (S.).
Mergler.
Duff.

Class II. Monk.
Salomon (F.).
Salomon (R.).

Class III. Brandes.

German: *Course 7.*

Class I. Stamm.
Solomon (S.).
Monk.
Mergler.

Class II. None.

Class III. None.

German: Course 8.

Class I. Stamm.
Solomon (S.) and Duff, equal.
Mergler.

Class II. Monk.

Class III. None.

DEPARTMENT OF ORIENTAL LANGUAGES.

Course 1.

Class I. Taylor.

Class II. Vineberg.

Class III. Bennett.

Course 3.

Class I. None.

Class II. Hetherington.

Class III. None.

Course 7.

Class I. Hetherington.

Class II. None.

Class III. None.

DEPARTMENT OF PHILOSOPHY.

Course 1.

Class I. Evans.
Somerville.
Moody.

Class II. Flanagan.
Wiseman.
Peterson.

Class III. Adair and Knowlton, equal.
Fredman.
Murray.
Boyd.
Robertson.
Baker.
Bourke.

Course 3.

Class I. Nichol (J.).
Evans.
Tarshis and Salomon (F.), equal.

Class II. Wall.
Freedman and Baker, equal.
Somerville.
Flanagan and Moody, equal.
Goodman.
Boyd.
Peterson.

Class III. Reid.
Caplan.
Robson and Adair and Wiseman, equal.
Coveler.
Center.
Murray.
Knowlton.
Duncan.
Bourke.

Course 4.

Class I. Klineberg.
Brady.
Paterson-Smyth.
Grier.

Class II. Terry.
Clapham and Suter, equal.
Baker and Boyd and Goodwin, equal.
Greer.
McRae.

Class III. Brandes and Shulemson, equal.
Delahanty.

Course 7.

Class I. Klineberg.
Muir.

Class II. Levy.

Class III. Duff.
Grier.

Course 8.

Class I. Klineberg.
Muir.

Class II. None.

Class III. None.

Course 14.

Class I. Klineberg.
Muir.
Presner.

Class II. None.

Class III. None.

DEPARTMENT OF PHYSICS.

Course 1. (B.A.)

Class I. Barnes (E. L.).
Mills and Snyder, equal.
Godwin and McPherson, equal.

Class II. Holland and Rowat, equal.
Barnes (D. S.) and Schleifstein, equal.
Reid (H. E.) and Shapira, equal.
Irwin.
Foster.
Davidson and Thornton and Sperber, equal.
Garrow and Spier and VanBuren, equal.

Class III. Craig and Campbell and Husk, equal.
Curtis.
Dobson and Hill, equal.
Franklin (B.).
Feldstein and Ross and Shulman and Wagner, equal.
Bishop and Ford and Echenberg, equal.
Cohen.
Louis and Macdonald (B.) and Mansfield, equal.
Barnard and Barrett and Sharples, equal.
Cameron and Cockfield and Franklin (M. H.) and Rountree, equal.
Johnson and Hooper and McClure, equal.
Harvey.
Pratt and Reid, equal.
Gillespie and Lewis and Overing, equal.
McEwen and Fineberg and Savage and Macdiarmid, equal.
Higginson and MacIntosh (H.), equal.
Neederhoffer and Silverman and Willson, equal.

Course 1. (B.Sc.)

Class I. Eager.
Mirsky.

Class II. Freedman.

Class III. Sifton.
McCarthy.
Kay and Rabinovitch, equal.

Course 2.

Class I. Freedman (N. B.).
Hill.
Petersen (J. N.).

Class II. Dougall.
McGlaughlin.
Moule.
Ereaux and Shaw and Henry and Robertson, equal.
Charlton.
Hemming.

Class III. Goddard and Rubin, equal.
Graham.
Booker.
Brandes.
Lindsay.
Reid (I. E.).
Galley.

Course 3.

Class I. Freedman (N. B.).

Class II. Hay (M. C.) and Petersen (J. N.), equal.
Rubin.
Ereaux.

Class III. Hibbard.
Duval.

Course 4.

Class I. Smith (L. A.).

Class II. Maclaren.

Class III. Robertson.

Course 10.

Class I. None.

Class II. Binmore.

Class III. None.

DEPARTMENT OF ZOOLOGY.

Course 2.

Class I. Ewing.
McDougall.

Class II. Rhodes.
Savage.
Black.
Forde.

Class III. McMillan (M.) and Popliger, equal.
Borden.
Mathewson and Smith, equal.
Martin.
McMillan (H.).
Duff and O'Brien, equal.

Course 3.

Class I. Maclennan.

Class II. Cramp.

Class III. None.

Course 5.

Class I. Robertson.
Fitzgerald and Mills, equal.
Rothschild.

Class II. Bussiere.

Class III. None.

Course 6.

Class I. Rhodes.

Class II. Duff.

Class III. None.

DEPARTMENT OF COMMERCIAL STUDIES.

FIRST YEAR.

ACCOUNTANCY.

Class I. Badian.

Class II. Levitt.

Class III. MacDonald (F. M.).

DRAWING.

Class I. Badian.
Levitt.

Class II. MacDonald.
Bockar.
McLagan.

Class III. Glickman.

ECONOMIC GEOGRAPHY.

Class I. MacDonald.
Levitt.
Badian.

Class II. Glickman.

Class III. Bockar.

ELEMENTARY SCIENCE.

Class I. Badian and MacDonald, equal.
Levitt.

Class II. Bockar.

Class III. Glickman.

ENGLISH.

Class I. Badian.

Class II. Levitt.

Class III. Glickman and MacDonald, equal.
Bockar.

FRENCH.

Class I. Badian.

Class II. MacDonald.
Levitt.

Class III. Glickman.

Commercial Mathematics.

Class I. Badian.
Levitt.
Macdonald.

Class II. None.

Class III. Glickman.

Political Economy.

Class I. None.

Class II. Badian.
MacDonald.

Class III. Levitt.
Glickman.
Bockar.

Political Economy (Extension Course).

Class I. Gerin (A.) and Thompson (A. M.), equal.

Class II. Fensom (G. H.).
Rogers (G. H.).

Class III. Hebert (C. H. E.).

SECOND YEAR.

Commercial Law.

Class I. None.

Class II. None.

Class III. None.

Spanish.

Class I. None.

Class II. None.

Class III. Delahanty and Salls, equal.

McGill University.

SESSIONAL EXAMINATIONS, 1917-18

REPORT OF THE

Faculty of Applied Science.

Honours in the Graduating Class of the Faculty of Applied Science, and Presentation of Medals, Certificates and Prizes, as follows:—

(Names in alphabetical order.)

Conroy, Joseph Matthew—Honours in Thermodynamics.
Dionne, Joseph Alexandre—Honours in Applications of Electricity and Photometry, and Thermodynamics.
Dörken, Herman Rudolph—Honours in Advanced Organic Chemistry, Food Chemistry, and Physical Chemistry.
Greaves, Clifford—Honours in Advanced Inorganic Chemistry.
Roscoe, Harold Morton—Dawson Fellowship in Mining; British Association Medal; Drummond Prize and Undergraduates' Society's Prize for Summer Essay; Honours in Mining Engineering.
Way, William Russell—Prize for Summer Essay and Undergraduates' Society's Prize for Summer Essay.
Weibel, Emil Edwin—British Association Medal; Crosby Steam Gauge and Valve Company's Prize for Summer Essay; Honours in Hydraulics and Laboratory and Hydraulics Machines, Machine Design, and Thermodynamics.

PASSED FOR THE DEGREE OF BACHELOR OF SCIENCE.

IN CHEMICAL ENGINEERING.

(In order of merit.)

Dörken, Herman Rudolf, Westmount, P.Q.
Greaves, Clifford, Barbadoes, B.W.I.

(*Unranked.*)

(In alphabetical order.)

Camp, Eric William, Montreal, P.Q.
Ulmer, George Gabriel, Jr., Montreal, P.Q.

IN CHEMISTRY.

Blackford, Henry Lloyd, Montreal, P.Q.

IN CIVIL ENGINEERING.

Pelletier, Henri Burroughs, Montreal, P.Q.

(*Unranked.*)

Brown, Arthur Alexander, Ottawa, Ont.

IN ELECTRICAL ENGINEERING

(In order of merit.)

Conroy, Joseph Matthew, Britannia Bay, Ont.
Dionne, Joseph Alexandre, Montreal, P.Q.
Moore, William McLean, Sydney, N.S.
Way, William Russell, Montreal, P.Q.
Sutherland, Daniel McLeod, New Glasgow, N.S.
Jordan, Leo Joachim, Lindsay, Ont.
Fox, Thomas John Joseph, New York City, U.S.A.
Cann, Frederick Lorne, Peterborough, Ont.

(*Unranked.*)

(In alphabetical order.)

Beverly, Ira W., Rossland, B.C.
Gerrie, William Houston, Kenora, Ont.
Patterson, James Freebairn, Montreal, P.Q.
Weagant, Roy A., New York, U.S.A.

IN MECHANICAL ENGINEERING.

(In order of merit.)

Weibel, Emil Edwin, Montreal, P.Q.
Parke, Charles Sager, Hamilton, Ont.
Crombie, Hugh Arthur, Toronto, Ont.

IN MINING ENGINEERING.

(In order of merit.)

Roscoe, Harold Morton, Centreville, N.S.
Livingstone, Edward Archibald, Washington, D.C., U.S.A.

(*Unranked.*)

Weir, William, Notre Dame de Grace, P.Q.

THIRD YEAR.

PRIZES.

(In alphabetical order.)

Bétournay, J. Noé—J. M. McCarthy Fieldwork Prize.
Buchanan, Colin Archibald—British Association Exhibition for Strength of Materials and Mechanics.

PASS LIST OF THE SESSIONAL EXAMINATIONS.

IN ARCHITECTURE.

(*Unranked.*)

Thompson, Grattan D., Montreal, P.Q.

IN CHEMICAL ENGINEERING.

(In order of merit.)

Brennen, Herbert Joseph, Westmount, P.Q.
*Proudfoot, David G., Montreal, P.Q.
*Amdur, Leon, Montreal, P.Q.
*Brennen, James Hugh, Westmount, P.Q.
Edward, Arthur James, Ottawa, Ont.

IN CHEMISTRY.

(In order of merit.)

*Levitt, E., Montreal, P.Q.
*Mouquin, Henri, Jr., New York, U.S.A.

IN CIVIL ENGINEERING.

(In order of merit.)

*Buchanan, Colin Archibald, Levis, P.Q.
*Pitt, Sylvester Sheridon, Montreal, P.Q.
*McLellan, Harold Elmer, Summerside, P.E.I.

(*Unranked.*)

Ferguson, George Harry, Nelson, B.C.
McCutcheon, Manford Wendell, Montreal, P.Q.

IN ELECTRICAL ENGINEERING.

(In order of merit.)

*Code, Francis Leslie, Ottawa, Ont.
Thompson, Trevor Creighton, Montreal, P.Q.

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*Conditional upon passing supplemental examinations.

(*Unranked.*)

(In alphabetical order.)

Doran, James, Montreal, P.Q.

IN MECHANICAL ENGINEERING.

(In order of merit.)

*Patten, Roy Hamilton, St. George, Ont.
*Walker, Melvyn Lothian, Pointe Gatineau, P.Q.

IN METALLURGICAL ENGINEERING.

Clarke, Richard Gladstone, Bear River, N.S.

IN MINING ENGINEERING.

(In order of merit.)

*Tousaw, Albert Anderson, Westmount, P.Q.
*Anderson, Clayton Earle, Ottawa, Ont.
*Lawrence, Harold George, St. John, N.B.
*Beach, Donald Johnston, Ottawa, Ont.

SECOND YEAR.

PRIZES.

(In alphabetical order.)

Cunningham, Frederick James—Third Prize for Mathematics and Mechanics.
Dunbar, John Robert—First Prize for Mathematics and Mechanics.
Goodman, Charles Davis—Messrs. Anglins Limited Prizes for Architectural Drawing and Construction.
Larose, Paul—Second Prize for Mathematics and Mechanics.

PASS LIST OF THE SESSIONAL EXAMINATIONS.

IN ARCHITECTURE.

(In order of merit.)

Goodman, Charles Davis, Montreal, P.Q.
*Lyman, Walter Kenneth Gordon, Montreal, P.Q.
*Durnford, Alexander Tilloch Galt, Montreal, P.Q.

(*Unranked.*)

Thomas, Philip, Montreal, P.Q.

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*Conditional upon passing supplemental examinations.

IN CHEMISTRY.

(In order of merit.)

Millar, Thomas Boyd, Portage La Prairie, Man.
*Cohen, Joseph, Ottawa, Ont.

OTHER COURSES.

(In order of merit.)

Dunbar, John Robert, Ottawa, Ont.
Cunningham, Frederick James, Ottawa, Ont.
Larose, Paul, Montreal, P.Q.
Schippel, Walter Herbert, Montreal, P.Q.
*Hannan, James Jr., Irvington, N.Y., U.S.A.
Labell, Maurice Nelson, Mansonville, P.Q.
Powell, John Murray, Ottawa, Ont.
*MacDonald, Dan, Piopolis, P.Q.
Henry, Leslie S., Montreal, P.Q.
*Windsor, J. Rorke, Westmount, P.Q.
*Bradley, Herbert Ellison, Smith's Falls, Ont.
*Calkin, Darrell Lorraine, Kentville, N.S.
*Thomson, Walter Wilfred, Outremont, P.Q.
*Wiggs, Gordon Lorne, Quebec, P.Q.
*Lafontaine, Gerard H., Montreal, P.Q.
*Deneau, Gaston, Montreal, P.Q.
*Cromwell, Harry Roy, Sawyerville, P.Q.
*Edwards, Gordon Maxwell Meighen, Ottawa, Ont.
*Dewar, Charles Leonard, Ottawa, Ont.

(*Unranked.*)

(In alphabetical order.)

Bétournay, J. Noé, St. Lambert, P.Q.
Karnes, Harry V., Staunton, Va., U.S.A.
Kearns, William Francis, Ottawa, Ont.
Kelley, John Leo, Buckingham, P.Q.
Mouquin, Henri, Jr., New York, U.S.A.
Patten, Roy Hamilton, St. George, Ont.
Pitt, Sylvester Sheridon, Montreal, P.Q.

FIRST YEAR.

PRIZES.

(In alphabetical order.)

Fortin, Gaston Lalonde—First Prize for Mathematics, Descriptive Geometry and Physics.
Gliddon, Claude—Second Prize for Mathematics, Descriptive Geometry and Physics.
Jackson, Carl Henry—First Fleet Shopwork Prize.
Kennedy, Charles Laurence—Second Fleet Shopwork Prize.
Phelan, Thomas—Scott Exhibition for Mathematics, Descriptive Geometry and Physics.

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*Conditional upon passing supplemental examinations.

PASS LIST OF THE SESSIONAL EXAMINATIONS.

IN ARCHITECTURE.

*VanEtten, Frederick Bouton, Kingston, N.Y.

OTHER COURSES.

(In order of merit.)

Phelan, Thomas Enslow, Westmount, P.Q.
Fortin, Gaston Lalonde, Ottawa, P.Q.
Cuddy, John Michael, Montreal, P.Q.
Gliddon, Claude, Ottawa, Ont.
Brow, James Barrett, Charlottetown, P.E.I.
Jackson, Carl Henry, Montreal, P.Q.
Binmore, George Bedell, Outremont, P.Q.
Gardner, John George, Montreal, P.Q. } equal.
Bush, Harold Frederick, Ottawa, Ont. }
Canning, Dow Vernon, Westmount, P.Q.
O'Halloran, James, Ottawa, Ont.
*Bailey, Maxwell Samuel, Montreal, P.Q.
Bain, George W., Lachute, P.Q.
Maxwell, Edward Blythe, Montreal, P.Q.
*Bissell, Harold Rodolph, L'Orignal, Ont.
Challenger, James Othneil, St. Kitts, B.W.I.
McLennan, Gordon Roderick, Ottawa, Ont.
Acton, Harold Joseph, Westmount, P.Q.
Pevzner, Isadore, Montreal, P.Q.
Connell, Gerald P., Ottawa, Ont.
*Grout, George Dixon Bouchier, Ottawa, Ont.
*Brault, Paul G. A., Outremont, P.Q.
*Jordan, Herbert Scott, Westmount, P.Q.
*Crawford, Robert Eric Anderson, Montreal, P.Q.
*Livingstone, Kenneth Mackay, Washington, D.C., U.S.A.
*Gauthier, Paul Gilles, Montreal, P.Q.
*Steacie, Edgar William Richard, Westmount, P.Q.
*Yates, Christopher Montague, Montreal, P.Q.
*Kennedy, Charles Laurence, Parkdale, Man.
*Shotwell, John Stuart Glashan, Ottawa, Ont.
*Joseph, Henry Thomas Gratz Walkem, Montreal, P.Q.

(*Unranked.*)

(In alphabetical order.)

Beach, Donald Johnston, Ottawa, Ont.
Hoichberg, Harry, Montreal, P.Q.
Levitt, E., Montreal, P.Q.
Proudfoot, David G., Montreal, P.Q.
Rashback, Harry, Montreal, P.Q.

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*Conditional upon passing supplemental examinations.

STANDING IN THE SEVERAL SUBJECTS.

(1) STUDENTS IN ARCHITECTURE.

ARCHITECTURAL DESIGN.

Third Year.—*Class I.*—None. *Class II.*—None. *Class III.*—Thompson.
Second Year.—*Class I.*—None. *Class II.*—Lyman; Durnford and Goodman, equal. *Class III.*—None.

ARCHITECTURAL DRAWING.

Fourth Year.—*Class I.*—Fenster. *Class II.*—None. *Class III.*—None.
Second Year.—*Class I.*—Goodman. *Class II.*—None. *Class III.*—Durnford, Lyman.
First Year.—*Class I.*—None. *Class II.*—Van Etten. *Class III.*—Brown.

ARCHITECTURAL ESSAYS.

Fourth Year.—*Class I.*—None. *Class II.*—None. *Class III.*—Thomas, Fenster.
Second Year.—*Class I.*—Goodman. *Class II.*—Lyman. *Class III.*—Durnford.

ARCHITECTURAL GEOMETRY.

First Year.—*Class I.*—None. *Class II.*—None. *Class III.*—Brown and Van Etten, equal.

BUILDING CONSTRUCTION.

Second Year.—*Class I.*—None. *Class II.*—Goodman. *Class III.*—Lyman, Durnford.

BUILDING DETAILS.

Second Year.—*Class I.*—Goodman. *Class II.*—Durnford, Lyman. *Class III.*—None.

ELEMENTS OF ARCHITECTURE.

First Year.—*Class I.*—None. *Class II.*—None. *Class III.*—Brown.

ELEMENTS OF COMPOSITION.

Second Year.—*Class I.*—None. *Class II.*—Lyman. *Class III.*—Durnford, Goodman.

FREEHAND DRAWING.

Fourth Year.—*Class I.*—None. *Class II.*—None. *Class III.*—Fenster.
Second Year.—*Class I.*—None. *Class II.*—Durnford and Goodman, equal. *Class III.*—Lyman.
First Year.—*Class I.*—Van Etten. *Class II.*—Brown. *Class III.*—None.

HISTORY OF ARCHITECTURE (CLASSIC).

Second Year.—*Class I.*—Lyman. *Class II.*—None. *Class III.*—Goodman, Durnford.

HISTORY OF ARCHITECTURE (MEDIAEVAL).

Fourth Year.—Class I.—None. *Class II.*—Fenster. *Class III.*—None.

HISTORY OF ARCHITECTURE (MODERN).

Fourth Year.—Class I.—None. *Class II.*—None. *Class III.*—Fenster, Thomas.

HISTORY (GENERAL).

First Year.—Class I.—None. *Class II.*—Brown. *Class III.*—Van Etten.

ORNAMENT AND DECORATION NO. 9 (FIRST TERM).

Fourth and Third Years.—Class I.—None. *Class II.*—None. *Class III.*—Thomas.

PHYSICS.

First Year.—Class I.—None. *Class II.*—None. *Class III.*—Van Etten, Brown.

PHYSICS LABORATORY.

First Year.—Class I.—None. *Class II.*—Brown and Van Etten, equal. *Class III.*—None.

PROFESSIONAL PRACTICE.

Fourth Year.—Class I.—None. *Class II.*—Fenster. *Class III.*—None.

STRUCTURAL ENGINEERING II.

Fourth and Third Years.—Class I.—None. *Class II.*—None. *Class III.*—Fenster, Thomas.

STRUCTURAL ENGINEERING I.

Second Year.—Class I.—Goodman. *Class II.*—None. *Class III.*—Durnford.

STRUCTURAL ENGINEERING (DRAFTING) II.

Fourth and Third Years.—Class I.—Fenster. *Class II.*—Thomas. *Class III.*—None.

STRUCTURAL ENGINEERING (DRAFTING) I.

Second Year.—Class I.—Goodman, Durnford. *Class II.*—None. *Class III.*—Lyman.

SUMMER READING AND WORK.

Fourth Year.—Class I.—Thomas. *Class II.*—None. *Class III.*—None.
Second Year.—Class I.—Goodman. *Class II.*—Durnford, Lyman. *Class III.*—None.

(2) STUDENTS IN OTHER COURSES.

APPLICATIONS OF ELECTRICITY.

Fourth Year.—Class I.—Dionne. *Class II.*—Moore. *Class III.*—Conroy, Paterson, Way, Sutherland, Cann; Doran and Fox and Jorlan, equal.

APPLIED ELECTRO-CHEMISTRY AND LABORATORY.

Fourth Year.—Class I.—Dörken, Greaves, Dionne. *Class II.*—Wallace, Corroy, Moore, Blachford. *Class III.*—Camp and Jordan, equal; Cam, Dunbar, Way, Fox, Sutherland.

BRIDGE DESIGN.

Fourth Year.—Class I.—None. *Class II.*—Pelletier. *Class III.*—McCutcheon.

CHEMISTRY.

ADVANCED INORGANIC CHEMISTRY.

Fourth Year.—Class I.—Greaves. *Class II.*—Blachford. *Class III.*—None.

ADVANCED ORGANIC CHEMISTRY.

Fourth Year.—Class I.—Dörken. *Class II.*—None. *Class III.*—None.

FOOD CHEMISTRY.

Fourth Year.—Class I.—Dörken. *Class II.*—None. *Class III.*—Camp.

GENERAL CHEMISTRY.

Second Year.—Class I.—Cunningham, Dunbar, Larose; Hannan and Thomson, equal. *Class II.*—Schippel; Calkin and Labell and Wiggs, equal; Powell, Bradley, Erlenborn, Macdonald, Henry; Cromwell and Elder, equal; Dewar and Edwards, equal. *Class III.*—Hart and Windsor, equal; Muir and Ross, equal; Lafontaine; Deneau and Perriton, equal; Farnsworth, Kirk, Jue, Clottier.

Second Year (Chemistry Course).—Class I.—Millar. *Class II.*—Cohen. *Class III.*—None.

HISTORY OF CHEMISTRY.

Fourth Year.—Class I.—Greaves, Dörken. *Class II.*—Blachford. *Class III.*—Camp.

INORGANIC INDUSTRIAL CHEMISTRY.

Fourth Year.—Class I.—Dörken and Greaves, equal. *Class II.*—Blachford. *Class III.*—Camp.

INORGANIC QUALITATIVE ANALYSIS.

Third Year.—Class I.—Tousaw. *Class II.*—None. *Class III.*—Beach, Lawrence, Anderson, Dyer, Gerez.
Second Year.—Class I.—Millar. *Class II.*—None. *Class III.*—Cohen.

INORGANIC QUANTITATIVE ANALYSIS.

Third Year.—Class I.—Levitt, Brennen (H. J.). *Class II.*—Mouquin, Rashback; Amdur and Brennen (J. H.), equal. *Class III.*—Edward, Clarke, Proudfoot; Laing and Smith, equal.

INORGANIC QUANTITATIVE ANALYSIS AND LABORATORY.

Fourth Year.—Class I.—None. *Class II.*—Greaves. *Class III.*—None.

ORGANIC CHEMISTRY.

Third Year.—Class I.—Levitt. *Class II.*—Rashback. *Class III.*—Brennen (H. J.), Amdur; Brennen (J. H.) and Edward and Laing and Mouquin and Proudfoot, equal.

ORGANIC INDUSTRIAL CHEMISTRY.

Fourth Year.—Class I.—Dörken. *Class II.*—Blachford, Greaves. *Class III.*—Camp.

PHYSICAL CHEMISTRY.

Third Year.—Class I.—Brennen (H. J.), Levitt, Mouquin, Amdur. *Class II.*—Laing, Rashback, Brennen (J. H.). *Class III.*—Proudfoot, Edward, Parsons.

PHYSICAL CHEMISTRY AND LABORATORY.

Fourth Year.—Class I.—Dörken. *Class II.*—Greaves, Blachford. *Class III.*—None.

CRYSTALLOGRAPHY.

Fourth Year.—Class I.—None. *Class II.*—None. *Class IiI.*—Blachford.

DESCRIPTIVE GEOMETRY (MAP PROJECTIONS).

Third Year.—Class I.—Bétournay, Buchanan, Pitt. *Class II.*—McLellan. *Class III.*—Lamontagne.

DESCRIPTIVE GEOMETRY (PERSPECTIVE DRAWING).

Third Year.—Class I.—Buchanan, Pitt. *Class II.*—McLellan, Bétournay. *Class III.*—Jacquemart, Heeney, Lamontagne, Hoichberg.

DESCRIPTIVE GEOMETRY.

First Year.—Class I.—Fortin; Bailey and Brow and Gauthier, equal; Gardner and Jackson, equal; Bissell and Canning and Crawford, equal; Brooks and Bush and Cuddy, equal; Brault and Gliddon, equal; Acton and Livingstone and Phelan, equal; Binmore; Kennedy and O'Halloran, equal; Grout, Maxwell. *Class II.*—McLennan, Connell; Bain and Pevzner, equal; O'Sullivan, Jordan; Patterson and Spratt, equal. *Class III.*—Yates, Challenger, Stroud, Shotwell, Dubnitsky, Hamilton, Joseph, Ouellette.

DESIGNING.

Fourth Year.—Class I.—Crombie and Weibel, equal. *Class II.*—Parke. *Class III.*—None.

ELECTRIC LIGHT AND POWER DISTRIBUTION.

Fourth Year.—Class I.—Wallace, Moore. *Class II.*—Dunbar; Dionne and Sutherland, equal; Way. *Class III.*—Conroy; Cann and Jordan, equal; Doran and Fox, equal.

ELECTRIC TRACTION.

Fourth Year.—Class I.—Conroy and Way, equal; Dionne. *Class II.*—Moore, Fox; Cann and Sutherland, equal. *Class III.*—Jordan and Patterson, equal; Doran.

ELECTRICAL DESIGNING.

Fourth Year.—Class I.—Moore and Way, equal. *Class II.*—Dionne, Conroy, Jordan, Sutherland. *Class III.*—Doran and Fox, equal; Cann.

ELECTRICAL ENGINEERING.

Fourth Year.—Class I.—Way, Conroy. *Class II.*—Cann and Sutherland, equal; Fox. *Class III.*—Jordan, Dionne, Moore.
Third Year.—Class I.—None. *Class II.*—Code. *Class III.*—Thompson.

ELECTRICAL PHOTOMETRY AND ILLUMINATION.

Fourth Year.—Class I.—Dionne and Wallace, equal; Conroy; Patterson and Sutherland, equal; Cann. *Class II.*—Moore, Doran. *Class III.*—Jordan; Dunbar and Fox, equal.

ELECTRO-METALLURGY.

Fourth Year.—Class I.—Dionne. *Class II.*—Moore, Dörken, Way, Conroy. *Class III.*—Jordan, Fox, Cann; Doran and Sutherland, equal.

ELEMENTS OF ELECTRICAL ENGINEERING.

Fourth and Third Years.—Class I.—None. *Class II.*—Greaves, Dörken. *Class III.*—Skarin, Pelletier, Livingstone, Walker, McCutcheon, Patten, Camp.

ENGINEERING ECONOMICS.

Third Year.—Class I.—Pitt. *Class II.*—Proudfoot, Brennen (J. H.), Rashback, Levitt, Skarin, Buchanan, Smith. *Class III.*—Brennen (H. J.); Amdur and Mahaffy, equal; McLellan, Karnes, Patten, Fox; Laing and LaMontagne, equal; Kearns, Standish, Dyer.

ENGINEERING LAW.

Fourth Year.—Class I.—Dörken, Dionne, Pelletier, Conroy. *Class II.*—Greaves, Weibel, Thomas, Blachford. *Class III.*—Moore, Doran, Parke, Fenster, Sutherland, Skarin.

ENGLISH.

First Year.—Class I.—Phelan. *Class II.*—Crawford, Jordan, Pevzner, O'Halloran; Canning and Jackson and Steacie, equal; Acton and McLennan, equal; Bailey. *Class III.*—Binmore and Fortin, equal; Bain and Bush and Joseph and Shotwell and Yates, equal; Bissell and Kennedy and Spratt, equal; Carroll and Gardner, equal; O'Sullivan, Tansley; Gauthier and Van Etten, equal; Moore and Patterson, equal; Brow and Dubnitsky, equal; Turton; Challenger and Grout and MacGlashan, equal; Maxwell and Moas, equal; Connell and Mackenzie, equal; Fisk and Quinlan and Salamis, equal.

EXPERIMENTAL ENGINEERING.

Fourth Year.—Class I.—None. *Class II.*—Weibel, Crombie, Parke. *Class III.*—None.

FIRE ASSAYING.

Fourth and Third Years.—Class I.—None. *Class II.*—Tousaw, Anderson; Clarke and Lawrence, equal; Dyer. *Class III.*—Greaves, Beach.

FOUNDATIONS AND MASONRY.

Third Year.—Class I.—Skarin, Buchanan. *Class II.*—Pitt, Bétournay, McLellan. *Class III.*—Heeney, LaMontagne, Jacquemart.

FREEHAND DRAWING AND LETTERING.

First Year.—Class I.—Fortin and Jackson, equal; Cuddy, Pevzner, Kennedy, O'Halloran; Doiron and McLennan, equal; Acton and Gardner, equal; Maxwell, Brow; Binmore and Stroud, equal; Brault and Gauthier and Gliddon and Grout, equal. *Class II.*—Glen, Challenger; Fisk and Mackenzie, equal; Bain; Bush and Phelan, equal; Cross; Moas and Ouellette, equal; Tansley, O'Sullivan, Bissell; Hamilton and Yates, equal; Canning, Jordan. *Class III.*—Connell and Steacie, equal; McCullough and Spratt, equal; Gualtieri, Patterson; Cromwell and Livingstone, equal; McDougall, Moore.

GEODESY.

Fourth Year.—Class I.—None. *Class II.*—Pelletier. *Class III.*—Skarin, McCutcheon, Ferguson.

GEODETIC FIELDWORK.

Fourth Year.—Class I.—None. *Class II.*—Pelletier, McCutcheon. *Class III.*—None.

GEOLOGY (GENERAL).

Third Year.—Class I.—Tousaw. *Class II.*—Pitt, Buchanan, Mouquin, Anderson. *Class III.*—Beach; Gerez and Levitt, equal; Fox and Lawrence, equal; Lee, Bourret.

GEOLOGY OF CANADA.

Fourth Year.—Class I.—Roscoe. *Class II.*—None. *Class III.*—Livingstone.

GRAPHICAL STATICS.

Second Year.—Class I.—Cunningham and Hannan and Larose and Schippel, equal; Dunbar, Erlenborn, Goodman, Windsor. *Class II.*—Wiggs; Bradley and Deneau, equal; Perriton; Cloutier and Cromwell and Muir and Ross, equal; Calkin, Edwards. *Class III.*—Durnford and Henry, equal; Dewar and Jue and Labell, equal; Lyman, Powell, Kirk; Fraser and Lafontaine, equal; Macdonald, Thomson, Elder.

HEATING AND VENTILATION.

Fourth Year.—Class I.—Weibel, Parke. *Class II.*—Crombie. *Class III.*—None.

HYDRAULICS.

Fourth Year.—Class I.—Weibel, Wallace. *Class II.*—Dionne, Parke, Dunbar, Conroy; Crombie and Patterson, equal. *Class III.*—Jordan and McCutcheon and Sutherland, equal; Fox, Moore; Cann and Ferguson and Pelletier and Way, equal.

HYDRAULICS AND LABORATORY (SHORT COURSE).

Fourth Year.—Class I.—Dörken. *Class II.*—Greaves. *Class III.*—Roscoe, Livingstone.

HYDRAULICS MACHINES.

Fourth Year.—Class I.—Weibel. *Class II.*—Parke. *Class III.*—Pelletier.

LABORATORIES.

CHEMICAL LABORATORY.

Second Year.—Class I.—Cunningham and Dunbar, equal; Larose, Hannan, Schippel, Erlenborn, Macdonald, Windsor. *Class II.*—Thomson, Edwards; Calkin and Lafontaine and Powell, equal; Perriton, Hart, Elder, Dewar; Bradley and Ross, equal; Muir; Henry and Labell, equal. *Class III.*—Gibbs; Jue and Kirk, equal; Cloutier, Wiggs, Deneau, Cromwell.

Second Year (Chemistry Course).—Class I.—Millar. *Class II.*—None. *Class III.*—Cohen.

CHEMICAL LABORATORY (INORGANIC QUALITATIVE ANALYSIS).

Third Year.—Class I.—Tousaw. *Class II.*—Dyer and Gerez, equal. *Class III.*—Anderson; Beach and Lawrence, equal.
Second Year.—Class I.—Millar. *Class II.*—None. *Class III.*—Cohen.

CHEMICAL LABORATORY (INORGANIC QUANTITATIVE ANALYSIS).

Third Year (Chemical Engineering Course).—Class I.—Brennen (H. J.). *Class II.*—Amdur and Edward, equal; Rashback; Kearns and Proudfoot, equal. *Class III.*—Brennen (J. H.), Smith, Laing, Parsons.
Third Year (Chemistry Course).—Class I.—Levitt. *Class II.*—Mouquin. *Class III.*—Fox.
Third Year (Metallurgical Engineering Course).—Class I.—None. *Class II.*—Clarke. *Class III.*—None.

CHEMISTRY LABORATORY (ORGANIC).

Fourth Year.—Class I.—Dörken. *Class II.*—None. *Class III.*—Camp.
Third Year.—Class I.—Levitt, Edward, Brennen (H. J.). *Class II.*—Proudfoot, Kearns; Parsons and Rashback, equal. *Class III.*—Amdur and Smith, equal; Fox; Brennen (J. H.) and Laing, equal; Mouquin.

ELECTRICAL ENGINEERING LABORATORY.

Fourth Year (Electrical Engineering Course).—Class I.—Moore, Conroy, Way. *Class II.*—Dionne, Doran, Sutherland. *Class III.*—Fox and Cann, equal; Jordan.
Fourth and Third Years.—Class I.—Pelletier. *Class II.*—McCutcheon and Patten, equal; Greaves; Dörken and Skarin and Walker, equal; Standish; Livingstone and Roscoe, equal; Camp. *Class III.*—Ferguson, Kelly.
Third Year (Electrical Engineering Course).—Class I.—Code. *Class II.*—None. *Class III.*—Thompson.

GEODETIC LABORATORY.

Fourth Year.—Class I.—None. *Class II.*—Pelletier. *Class III.*—McCutcheon and Skarin, equal; Ferguson.

HYDRAULICS LABORATORY.

Fourth Year.—Class I.—Weibel, Wallace, Doran. *Class II.*—Moore, Way, Dionne, Sutherland, McCutcheon; Dunbar and Fox and Pelletier, equal; Cann and Jordan and Parke, equal; Crombie. *Class III.*—Conroy, Ferguson.

MECHANICAL ENGINEERING LABORATORY.

Fourth Year.—Class I.—Weibel. *Class II.*—Parke, Crombie. *Class III.*—None.

Third Year (*General Course*).—*Class I.*—Tousaw. *Class II.*—Patten and Walker, equal; Standish; Buchanan and Skarin, equal; Proudfoot, Pitt, Brennen (H. J.). *Class III.*—Edward; Bétournay and Laing and Lawrence, equal; Lamontagne, Brennen (J. H.), Smith, Lee, Amdur, Parsons, McLellan.

Third Year (*Electrical Engineering Course*).—*Class I.*—None. *Class II.*—Thompson, Code. *Class III.*—None.

METALLURGICAL LABORATORY AND METALLOGRAPHY.

Fourth Year.—*Class I.*—None. *Class II.*—Greaves, Blachford. *Class III.*—None.

Third Year.—*Class I.*—None. *Class II.*—Clarke. *Class III.*—None.

ORE DRESSING LABORATORY.

Fourth Year.—*Class I.*—Roscoe, Livingstone. *Class II.*—None. *Class III.*—Karnes.

PHYSICAL LABORATORY.

Third Year (*Electrical Engineering Course*).—*Class I.*—Code, Thompson. *Class II.*—None. *Class III.*—None.

Second Year.—*Class I.*—Cunningham, Larose, Millar, Dunbar. *Class II.*—Erlenborn and Schippel, equal; Jue, Henry, Powell, Dewar, Windsor, Macdonald. *Class III.*—Muir; Edwards and Lafontaine and Wiggs, equal; Labell; Bradley and Cohen and Ross, equal; Cromwell and Deneau, equal; Farnsworth and Thomson, equal; Perriton, Hannan, Calkin, Gibbs; Cloutier and Elder and Hart, equal.

First Year.—*Class I.*—Cuddy, Gardner, Bailey, Steacie, Yates, O'Halloran. *Class II.*—Livingstone and McDougall, equal; Bush and Gliddon, equal; Binmore and Bissell and Jackson and Pevzner, equal; Brault; Glen and Maxwell, equal; Crawford and Fortin and Phelan, equal; Grout and Salamis, equal; Bain and Gauthier and Kennedy, equal; Brow and Dubnitsky, equal; Moore and Stroud, equal; Shotwell; Brooks and Jordan and Joseph, equal. *Class III.*—Canning, Connell; Mackenzie and O'Sullivan and Tansley, equal; Challenger and McDonald, equal; Ross, Fisk, Gualtieri; Acton and McCullough and McLennan and Patterson, equal; Carroll and Quinlan and Spratt and Turton, equal; Morrison, MacGlashan, Hamilton; Cromwell and Henderson, equal.

STRENGTH OF MATERIALS LABORATORY.

Third Year.—*Class I.*—Buchanan. *Class II.*—Standish, Pitt; Bétournay and Code, equal; Tousaw. *Class III.*—McLellan, Brennen (H. J.), Proudfoot, Amdur; Dyer and Kearns and Rashback and Walker, equal; Brennen (J. H.) and Patten, equal; Anderson and Edward and Thompson, equal; Laing, Smith, LaMontagne; Beach and Lawrence, equal; Gerez.

MACHINE DESIGN.

Fourth Year (*Electrical Engineering Course*).—*Class I.*—Dionne and Wallace, equal; Conroy, Patterson, Dunbar. *Class II.*—Jordan, Moore, Sutherland. *Class III.*—Way, Doran, Fox, Cann.

Fourth Year (Mechanical Engineering Course).—Class I.—Weibel, Parke. *Class II.*—Crombie. *Class III.*—None.
Third Year.—Class I.—None. *Class II.*—Standish. *Class III.*—Code and Thompson, equal; Patten.

MAPPING.

Third Year.—Class I.—Buchanan; Bétournay and Pitt, equal. *Class II.*—None. *Class III.*—McLellan, LaMontagne, Hoichberg.
Second Year.—Class I.—Cunningham and Schippel, equal; Larose, Powell; Dewar and Dunbar and Perriton, equal; Thomson; Goodman and Jue, equal; Edwards and Hannan and Henry, equal. *Class II.*—Farnsworth; Bethune and Wiggs, equal; Cromwell and Deneau, equal; Calkin and Elder and Muir, equal; Cloutier and Durnford and Labell, equal; Macdonald, Lafontaine, Windsor, Gibbs, Bradley. *Class III.*—Hart, Lyman, Ross.

MATERIALS OF CONSTRUCTION.

Second Year.—Class I.—Cunningham. *Class II.*—Hannan and Schippel, equal; Larose, Cromwell; Calkin and Dewar, equal; Lafontaine; Erlenborn and Thomson, equal; Dunbar; Bethune and Muir, equal. *Class III.*—Henry, Windsor, Labell, Elder; Bradley and Macdonald, equal; Cloutier and Edwards and Gibbs and Hart, equal; Wiggs, Powell, Farnsworth; Deneau and Ross, equal; Perriton, Kirk.

MATHEMATICS.

ALGEBRA.

First Year.—Class I.—Phelan, Fortin; Binmore and Canning, equal. *Class II.*—Gliddon, Bailey, Cuddy; Challenger and Gardner, equal; Brault; Brow and Bush and McDougall, equal. *Class III.*—Bain and Connell and Jackson, equal; Maxwell; Grout and O'Halloran, equal; Joseph, Dubnitsky, Crawford; Acton and Jordan and McLennan, equal; Bissell, Steacie, Yates, Bethune; Livingstone and Pevzner and Shotwell, equal; Gauthier, Spratt; Hill and Henderson and Kennedy and Patterson and Salamis and Tansley and Van Etten, equal.

ANALYTIC GEOMETRY.

Second Year.—Class I.—Dunbar, Larose, Cunningham; Macdonald and Powell, equal; Edwards. *Class II.*—Henry and Schippel, equal; Erlenborn and Millar, equal; Calkin; Hannan and Labell, equal; Windsor; Bradley and Cohen, equal. *Class III.*—Cloutier and Cromwell, equal; Cambron, Lafontaine, Dewar, Deneau; Elder and Muir, equal; Kirk; Jue and Thomson and Wiggs,

CALCULUS.

Third Year.—Class I.—None. *Class II.*—None. *Class III.*—Thompson, Code.

Second Year.—Class I.—Dunbar and Larose, equal; Cunningham. *Class II.*—Erlenborn, Schippel. *Class III.*—Bradley, Powell, Calkin; Hannan and Windsor, equal; Macdonald, Labell; Deneau and Millar, equal; Lafontaine; Cromwell and Henry, equal; Wiggs.

GEOMETRY.

First Year.—Class I.—Fortin, Phelan. *Class II.*—Gliddon; Brault and Joseph, equal; Bailey, Livingstone, Canning; Grout and Steacie, equal; Cuddy, Bush; Gardner and O'Halloran, equal. *Class III.* Brow and Connell and Salamis, equal; Binmore, McDougall; Brown and Jordan, equal; Crawford and Jackson and Maxwell, equal; Shotwell, Pevzner; O'Sullivan and Patterson, equal; Bissell and Tansley, equal; Cromwell and McLennan, equal; Acton and Yates, equal; Bain and Bethune and Challenger and Cross and Gauthier and Van Etten, equal.

MECHANICS.

Third Year.—Class I.—None. *Class II.*—Thompson. *Class III.*—Jacquemart, Buchanan; McLellan and Patten, equal; Walker, Heeney.

Second Year.—Class I.—Dunbar, Larose, Cunningham. *Class II.*—Schippel; Bradley and Erlenborn, equal. *Class III.*—Henry, Labell, Millar, Powell, Edwards, Calkin, Lafontaine, Cohen, Fraser, Hannan.

First Year.—Class I.—Jackson, Bailey, Brow; Bush and Cuddy, equal; Gliddon; Fortin and Phelan, equal. *Class II.*—Brooks, Gardner; Bain and Maxwell, equal; Canning, Binmore, Bissell. *Class III.* Brault and Jordan, equal; O'Halloran, Gauthier, Livingstone; Patterson and Shotwell, equal; Pevzner and Steacie and Yates, equal; Challenger; Acton and McLennan, equal; Crawford, Connell; Joseph and Kennedy, equal.

TRIGONOMETRY.

First Year.—Class I.—Brow; Bush and Fortin, equal. *Class II.*—Grout, Phelan; Brault and Gliddon, equal; Joseph, Cuddy; Canning and O'Halloran, equal. *Class III.*—Bailey and Jackson, equal; Binmore, Crawford, McLennan, Dubnitsky and McDougall, equal; Bissell and Brown, equal; Bain and Gardner, equal; Challenger and Yates, equal; Connell, Maxwell; O'Sullivan and Pevzner, equal; Acton and Stroud, equal; Bethune and Steacie, equal; Livingstone; Gauthier and Salamis, equal; Gualtieri and Kennedy and Spratt and Tansley and Van Etten, equal.

MECHANICAL DRAWING.

Third Year (Electrical Engineering Course).—Class I.—None. *Class II.*—Code. *Class III.*—Thompson.

Third Year (Mechanical Engineering Course).—Class I.—None. *Class II.*—None. *Class III.*—Patten; Standish and Walker, equal.

Second Year.—Class I.—Schippel, Larose, Cunningham, Bethune, Dewar, Perriton. *Class II.*—Dunbar; Erlenborn and Farnsworth and Henry and Windsor, equal; Elder, Powell, Jue; Edwards and Ross, equal; Hannan; Cromwell and Lafontaine, equal; Deneau. *Class III.*—Macdonald; Calkin and Labell and Thomson, equal; Bradley, Muir, Wiggs, Hart, Gibbs, Cloutier.

First Year.—Class I.—Ouellette, Cuddy, Fortin, O'Halloran, Jackson, Kennedy, Brow. *Class II.*—Steacie; Brault and McLennan, equal; Gardner and Maxwell, equal; Challenger and Gliddon, equal; Grout, Binmore; Bush and Dubnitsky and Stroud, equal. *Class III.*—Gauthier and Glen and Pevzner, equal; Bain, Bissell; Livingstone and Phelan, equal; Moore; Brooks and Connell and Jordan and Mackenzie, equal; McCullough; Cromwell and Morrison and Fisk, equal; O'Sullivan and Shotwell, equal; McDougall; Acton and Canning and Spratt and Tansley and Yates, equal; Moas; Gualtieri and Hamilton and Patterson and Turton, equal; Joseph; Quinlan and Salamis, equal; Bailey, Crawford, McGlashan, McDonald.

MECHANICAL ENGINEERING.

Third Year (General Course).—Class I.—Code. *Class II.*—Edward, Tousaw; Skarin and Thompson, equal; Clarke, Brennen (H. J.). *Class III.*—Lawrence and Proudfoot, equal; Brennen (J. H.), Buchanan, Laing, Anderson, McLellan, Kelly, Mahaffy, Dyer, Amdur, LaMontagne; Karnes and Kearns, equal; Bétournay.

Third Year (Mechanical Engineering Course).—Class I.—Patten and Walker, equal; Standish. *Class II.*—None. *Class III.*—None.

MECHANICS OF MACHINES.

Fourth Year.—Class I.—Weibel. *Class II.*—Parke. *Class III.*—Crombie.

Third Year.—Class I.—Crombie. *Class II.*—Code. *Class III.*—Walker; Patten and Thompson, equal.

Second Year.—Class I.—Larose, Dunbar, Cunningham, Schippel. *Class II.*—Erlenborn, Labell, Bradley, Dewar, Elder, Ross. *Class III.*—Hannan, Windsor; Henry and Powell, equal; Deneau; Jue and Macdonald and Wiggs, equal; Perriton, Mahaffy; Cromwell and Gibbs and Thomson, equal.

METALLURGY.

Fourth Year.—Class I.—None. *Class II.*—Livingstone, Roscoe. *Class III.*—None.

Third Year (Chemistry and Chemical Engineering Courses).—Class I.—Brennen (H. J.). *Class II.*—None. *Class III.*—Parsons, Edward, Mouquin, Laing; Brennen (J. H.) and Rashback and Levitt, equal; Kearns and Proudfoot, equal; Amdur, Fox.

Third Year (Mining Engineering Course).—Class I.—None. *Class II.*—Tousaw, Clarke. *Class III.*—Lee; Anderson and Lawrence, equal; Gerez, Bourret.

METALLURGICAL CALCULATIONS.

Third Year.—Class I.—Clarke. *Class II.*—None. *Class III.*—None.

METALLURGICAL COLLOQUIUM.

Third Year.—Class I.—Clarke. *Class II.*—None. *Class III.*—None.

MILITARY ENGINEERING.

Fourth Year.—Class I.—None. *Class II.*—Roscoe; Livingstone and Jordan, equal. *Class III.*—Way, Camp, Ferguson, Patterson.

MINE MAPPING.

Third Year.—Class I.—None. *Class II.*—Tousaw, Dyer; Lawrence and Lee, equal; Beach; Anderson and Gerez, equal. *Class III.* None.

MINERAL ANALYSIS.

Fourth Year.—Class I.—None. *Class II.*—Roscoe, Livingstone, Karnes. *Class III.*—None.

MINERALOGY.

Third Year.—Class I.—Tousaw. *Class II.*—Mouquin, Beach, Anderson, Levitt. *Class III.*—Gerez, Clarke, Brennen (J. H.); Brennen (H. J.) and Fox and Lawrence, equal; Edward, Proudfoot.

MINERALOGY (DETERMINATIVE).

Third Year.—Class I.—Tousaw, Levitt, Brennen (J. H.), Edward (A. J.). *Class II.*—Bourret and Mouquin, equal; Anderson and Brennen (H. J.) and Laing and Lawrence, equal; Rashback, Beach, Proudfoot; Gerez and Kearns, equal. *Class III.*—Parsons, Clarke, Dyer, Amdur, Fox.

MINING COLLOQUIUM.

Fourth Year.—Class I.—Roscoe, Livingstone. *Class II.*—None. *Class III.*—None.

MINING ENGINEERING.

Fourth Year.—Class I.—Roscoe. *Class II.*—Livingstone. *Class III.*—None.

Third Year.—Class I.—Lee. *Class II.*—Clarke; Dyer and Tousaw, equal. *Class III.*—Bourret, Anderson, Lawrence, Gerez, Beach.

MINING MACHINERY AND DESIGN.

Fourth Year.—Class I.—Roscoe. *Class II.*—Livingstone. *Class III.*—None.

MUNICIPAL ENGINEERING.

Fourth Year.—Class I.—None. *Class II.*—Pelletier, Ferguson. *Class III.*—None.

Third Year.—Class I.—Buchanan. *Class II.*—Bétournay. *Class III.*—Pitts, Mahaffy, LaMontagne.

ORE DEPOSITS AND ECONOMIC GEOLOGY.

Fourth Year.—Class I.—Roscoe. *Class II.*—Livingstone. *Class III.*—None.

ORE DRESSING.

Third Year (Chemical Engineering Course) (First Term).—Class I.—None. *Class II.*—Proudfoot. *Class III.*—Amdur, Lashback.

Third Year (Chemical Engineering Course) (First and Second Terms).—Class I.—Brennen (H. J.). *Class II.*—None. *Class III.*—None.

ORE DRESSING AND LABORATORY.

Third Year (Mining and Metallurgical Engineering Courses).—Class I.—Tousaw, Lee, Bourret. *Class II.*—Clarke, Lawrence, Dyer, Anderson. *Class III.*—Beach, Gerez.

ORE DRESSING AND MILLING.

Fourth Year.—Class I.—Roscoe. *Class II.*—Livingstone. *Class III.*—None.

ORE DRESSING LABORATORY (THESIS WORK).

Fourth Year.—Class I.—Roscoe, Livingstone. *Class II.*—None. *Class III.*—None.

PETROGRAPHY AND LABORATORY.

Fourth Year.—Class I.—None. *Class II.*—Roscoe, Livingstone. *Class III.*—None.

PHYSICS.

Third Year (Electrical Engineering Course).—Class I.—Code. *Class II.*—None. *Class III.*—Thompson.

Second Year.—Class I.—Larose, Dunbar, Millar. *Class II.*—Cunningham, Erlenborn. *Class III.*—Edwards and Hannan and Henry, equal; Labell and Schippel, equal; Cohen; Macdonald and Windsor, equal; Powell, Kirk; Bradley and Labntaine and Thomson and Ross, equal.

First Year.—Class I.—Bain; Brow and Cuddy, equal. *Class II.*—Gliddon, Phelan; Bush and O'Halloran, equal; Canning and Gardner, equal; Jackson, Jordan, Binmore. *Class III.*—Acton, Shotwell; Bailey and Salamis, equal; Bissell and Connell, equal; Maxwell, Challenger; Fortin and Gualtieri and Tansley, equal; Livingstone; Grout and McLennan and Perzner, equal; Crawford; Carroll and McDougall and Steacie, equal.

POWER PLANT DESIGN.

Fourth Year.—Class I.—None. *Class II.*—Weibel, Parke. *Class III.*—Crombie.

RAILWAY ENGINEERING.

Fourth Year.—*Class I.*—None. *Class II.*—Pelletier, McCutcheon. *Class III.*—Ferguson.

Third Year.—*Class I.*—None. *Class II.*—Buchanan. *Class III.*—Pitt, Lamontagne, McLellan.

SHOP METHODS.

Second Year.—Larose and Schippel, equal; Dunbar, Dewar, Cunningham, Bethune, Windsor, Thomson, Lafontaine, Henry. *Class II.*—Calkin and Elder and Jue, equal; Bradley, Perriton; Muir and Powell, equal; Macdonald; Cromwell and Deneau, equal; Clouter and Edwards and Farnsworth and Wiggs, equal. *Class III.*—Hart, Gibbs, Labell.

First Year.—Bain and Gliddon, equal; Cuddy and Fortin, equal; Bush and O'Halloran, equal; Bissell and Brow, equal; Grout; Jackson and McLennan, equal; Glen; Phelan and Shotwell, equal; Jordan; Gardner and Kennedy, equal; Challenger, Livingstone; Connell and Gauthier, equal; Binmore and Canning, equal; Maxwell. *Class II.*—Fisk and McDougall and Pevzner and Quinlan and Stroud, equal; Crawford, Brault, Morrison; Carroll and Joseph and McDonald and O'Sullivan, equal; Yates; Acton and Brooks and Patterson, equal; Gualtieri. *Class III.*—Moore, Salanis; Mackenzie and Steacie and Turton, equal; MacGlashan, Bailey, Dubnitsky, Cromwell, Spratt, Hamilton.

SHOP PROCESSES AND MANAGEMENT.

Third Year—Class I.—None. *Class II.*—Standish. *Class III.*—Patten.

SHOPWORK.

Fourth Year.—*Class I.*—None. *Class II.*—Weibel, Parke. *Class III.*—Crombie.

Third Year.—*Class I.*—None. *Class II.*—Patten, Walker, Standish. *Class III.*—None.

Second Year.—*Class I.*—Macdonald. *Class II.*—Bethune, Hannan; Cunnngham and Larose, equal; Schippel; Dunbar and Farnsworth, equal; Deneau and Henry and Powell and Thomson, equal; Muir Cromwell and Fraser and Wiggs, equal; Hart and Labell, equal Lafontaine and Windsor, equal. *Class III.*—Calkin and Edwards and Elder and Jue, equal; Dewar, Perriton, Bradley, Clouter, Gibbs.

First Year.—*Class I.*—O'Halloran, Jackson; Gliddon and Kennedy, equal Fortin and Gardner, equal; Bain and Maxwell, equal. *Class II.*—Binmore; Challenger and McLennan and Pevzner, equal Cuddy; Brow and O'Sullivan, equal; Grout; Acton and Livingstone and McDougall, equal; Phelan and Bissell, equal; Gautlier, Glen; Brault and Bush and Connell and Ouellette, equal Fisk and Jordan and Mackenzie and Tansley, equal; Brools and Canning and Carroll and Joseph and Quinlan and Stroul, equal. *Class III.*—Spratt and Steacie and Yates, equal; Moas; Cromwell and Gualtieri and Hamilton and Salamis, equal; Dubntsky and McDonald, equal; Bailey; Moore and Morrison and Shotwell, equal; Crawford, Turton, Patterson, Henderson.

STRENGTH OF MATERIALS.

Fourth Year.—Class I.—None. *Class II.*—None. *Class III.*—Pelletier, Skarin.

Third Year.—Class I.—Buchanan. *Class II.*—Anderson, Amdur, Tousaw, Brennen (H. J.). *Class III.*—McLellan and Pitt, equal; Code and Thompson, equal; Beach and Brennen (J. H.) and Standish and Walker, equal.

STRUCTURAL DESIGN.

Third Year.—Class I.—Buchanan, Pitt, Bétournay. *Class II.*—Tousaw, McLellan. *Class III.*—Anderson, Standish, Brennen (H. J.); Proudfoot and Walker, equal; Amdur, Kelly, Kearns, Patten; Gerez and Laing, equal.

SUMMER ESSAYS.

Fourth Year (Chemistry and Chemical Engineering Courses).—Class I.—Dörken, Greaves. *Class II.*—Camp. *Class III.*—None.

Fourth Year (Civil Engineering Course).—Class I.—None. *Class II.*—Ferguson. *Class III.*—Pelletier, McCutcheon.

Fourth Year (Electrical Engineering Course).—Class I.—Way, Cann, Wallace; Dunbar and Moore, equal. *Class II.*—Conroy and Sutherland, equal; Jordan. *Class III.*—Fox, Dionne, Doran.

Fourth Year (Mechanical Engineering Course).—Class I.—None. *Class II.*—Weibel. *Class III.*—Parke.

Fourth Year (Mining Engineering Course).—Class I.—Roscoe. *Class II.*—Livingstone. *Class III.*—None.

Third Year (Chemistry and Chemical Engineering Courses).—Class I.—None. *Class II.*—Kearns and Proudfoot, equal; Parsons. *Class III.*—Mouquin, Edward.

Third Year (Civil Engineering Course).—Class I.—None. *Class II.*—Heeney, Pelletier. *Class III.*—Pitt, Mahaffy.

Third Year (Electrical Engineering Course).—Class I.—None. *Class II.*—Louttit, Code. *Class III.*—Thompson.

Third Year (Metallurgical Engineering Course).—Class I.—None. *Class II.*—None. *Class III.*—Clarke.

Third Year (Mining Engineering Course).—Class I.—Tousaw. *Class II.*—Anderson, Beach, Gerez. *Class III.*—Bourret.

SUMMER READING.

Third Year.—Class I.—None. *Class II.*—Brennen (H. J.), Lamontagne, Lawrence, Whelen. *Class III.*—Bétournay, Kirk, Brennen (J. H.), Amdur, Walker.

Second Year.—Class I.—Dunbar, Cunningham. *Class II.*—Millar, Hannan, Thomson, Elder. *Class III.*—Macdonald and Perriton, equal; Schippel, Larose; Hart and Lafontaine and Windsor, equal; Elliot and Deneau, equal; Labell and Muir and Powell, equal; Farnsworth, Wiggs; Calkin and Jue, equal.

SUMMER SCHOOLS.

Third Year (Fire Assaying).—Class I.—None. *Class II.*—Fox and Mouquin, equal. *Class III.*—Levitt.

Third Year (*Inorganic Qualitative Analysis*).—*Class I.*—Brennen (H. J.), Brennen (J. H.). *Class II.*—Proudfoot; Clarke and Edward, equal; Rashback, Amdur. *Class III.*—Kearns; Laing and Parsons, equal

Third Year (*Inorganic Qualitative Analysis Laboratory*).—*Class I.*—Brennen (H. J.), Amdur. *Class II.*—Proudfoot, Rashback; Clarke and Kearns, equal; Smith; Brennen (J. H.) and Edward and Laing, equal. *Class III.*—Parsons.

Third Year (*Mechanical Drawing*).—*Class I.*—None. *Class II.*—None. *Class III.*—Thompson, Standish, Patten, Louttit, Code.

Third Year (*Physics*).—*Class I.*—None. *Class II.*—Thompson. *Class III.*—Code, Patten, Louttit, Standish.

Third Year (*Shopwork*).—*Class I.*—None. *Class II.*—Louttit, Patten, Code, Standish, Thompson. *Class III.*—Walker.

SURVEYING.

Third Year (*Civil Engineering Course*).—*Class I.*—Buchanan. *Class II.*—Pitt. *Class III.*—McLellan, LaMontagne, Mahaffy, Bétournay.

Third Year (*Mining Engineering Course*).—*Class I.*—None. *Class II.*—Tousaw, Lee. *Class III.*—Anderson, Lawrence, Bourret, Gerez, Beach.

Second Year.—*Class I.*—Cunningham, Dunbar; Hannan and Schippel, equal; Larose, Labell. *Class II.*—Cromwell, Henry, Calkin. *Class III.*—Edwards and Macdonald, equal; Windsor, Bradley; Ross and Thomson, equal; Goodman; Deneau and Dewar and Powell and Wiggs, equal; Muir, Kirk, Lafontaine; Gibbs and Perriton, equal.

SURVEYING FIELDWORK.

Third Year.—*Class I.*—McLellan, Bétournay, Tousaw. *Class II.*—Beach, Heeney, Anderson; Jacquemart and Lawrence, equal; Lamontagne, Livingstone; Fraser and Hoichberg, equal. *Class III.*—Gerez.

Second Year.—*Class I.*—Cunningham; Calkin and Schippel, equal. *Class II.*—Dunbar; Dewar and Edwards, equal; Goodman and Wiggs, equal; Jue; Hannan and Muir and Powell, equal; Lyman; Cloutier and Deneau, equal; Henry; Cromwell and Farnsworth and Labell and Perriton, equal; Hart and Lafontaine and Windsor, equal; Thomson; Gibbs and Macdonald, equal. *Class III.*—Larose, Elder, Malone.

THEORY OF STRUCTURES.

Fourth Year.—*Class I.*—None. *Class II.*—None. *Class III.*—Pelletier, McCutcheon.

THERMODYNAMICS.

Fourth Year (*Mechanical Engineering Course*).—*Class I.*—Weibel. *Class II.*—Crombie. *Class III.*—Parke.

Fourth and Third Years.—*Class I.*—Conroy, Dionne, Patterson. *Class II.*—Sutherland, Fox, Crombie, Walker, Moore. *Class III.*—Way, Jordan, Standish, Patten, Doran, Cann.

WORKS ORGANIZATION AND ACCOUNTING.

Fourth Year.—*Class I.*—None. *Class II.*—Weibel. *Class III.*—Parke.

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